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Covid 19 Vaccines and the Australian health care state

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ABSTRACT

Objectives: Australia had one of the most successful early responses to the COVID-19 pandemic. Border closures and effective public health responses to outbreaks kept infection and death rates to amongst the lowest in the world. The strategy was premised on an eventual escape through the development and availability of vaccines. While effective vaccines appeared earlier than many expected, Australia's the next stage of crisis management stalled. Vaccination rates were, in mid-2021, one of the lowest in the OECD. By the end of 2021, however, Australia had a comparatively high vaccination rate. This paper accounts for this paradoxical situation.

Methods: The analysis uses Moran and Tuohy's concept of the 'health care state' to show how interlocking elements of consumption, production, governance and statecraft created the conditions for Australia's contradictory response to the crisis.

Results: The paper locates problems commonly attributed to 'leadership failure' in an analysis of the evolving dynamics of the Australian healthcare state and the governance regimes concerning collective consumption, the health professions, and technologies. Vaccine supply was delayed by the Federal government's preference for local production. The initial problems of the vaccine rollout arose from a failed experiment with outsourcing, initiated at the height of the crisis.

Conclusion: Australia's ultimate success in achieving high vaccination rates emerged from the agile stability embedded in its health care state. This delivered where 'market inspired innovation' had failed.

Public interest summary

Australia went from high success in controlling the COVID-19 pandemic to becoming one of the laggards in taking up vaccines, when they became available. After a slow start, by the end of 2021 Australia had one of the highest levels of vaccinated adults in the world. This paper explores this contradictory path. Policy decisions were shaped by the Australian 'health care state' – the management of complex relationships between levels of government, producer interests, (including vaccine research and manufacture – domestic and global) and the public and private sector distribution channels that get vaccines to consumers. Initial problems were caused by reliance on domestic production and a preference for untried private sector distribution channels. Australia's ultimate success in achieving high vaccination rates emerged from reliance on the established structures of its health care state. These delivered where 'market inspired innovation' had failed.

Introduction

Throughout 2020, Australia successfully controlled the initial impact of Covid-19, with relatively low cases numbers per capita and few people dying from the virus by the year's end. Prior to the pandemic most Australians were immunised against common infectious diseases, with a 95% coverage rate for its childhood vaccination schedule [1]. Despite this track record, by mid-2021 it had one of the lowest Covid 19 vaccination rates in the OECD. As 2021 ended, however, Covid 19 vaccination rates were amongst the highest globally [2].

How can sense be made this paradoxical unfolding of events? Popular accounts, especially in the Australian media, have focused on issues of leadership, with early favourable accounts soon shifting to apportioning complete responsibility for failures to the Prime Minister and federal Minister for Health [3,4]. While of some explanatory power, such accounts only go so far.

This paper uses the notion of the health care state to make sense of a

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complex set of events and outcomes by using Moran's depictions of the healthcare state as an organising tool. Moran [5,6] notes that health care has become one of the largest components of most modern economies. He identifies three domains of governance in the health care state in such economies: consumption, the professions and technology. His model starts from the extensive reliance that all capitalist economies have placed on state regulation, subsidy, and direct provision to create regimes of 'collective consumption', providing access to health services. No developed nation has been able to rely on the 'market' to provide adequate health care to satisfy citizens' health demands. Nor do market forces on their own suffice to drive the advanced technologies (eg pharmaceuticals) of the modern healthcare economy, which are shaped by public support through university-based research and more direct subsidy of strategic industries [7]. Finally, no other industry has such a well-organized professional producer interest – pre-eminently but not only the medical profession [5].

Writing over two decades ago, Moran identified three basic types of health care states: command and control (eg UK and Scandinavia), supply driven (eg USA and Switzerland) and corporatist (eg Germany and the Netherlands) [6]. It is now recognised, however, that health care states are hybrids formed from histories that have led to nationally specific combinations of collective consumption (with public and private finance elements), distinctive organisation of the health professions and regimes of technological development and deployment. Modes of governance in these domains cohere on the bases of evolving political settlements or what Tuohy calls hybrid models crafted by political action as circumstances change [8]. Like all social institutions health care states are characterised by intricate combinations of continuity and change in their development over time.

Australia's hybrid model has been shaped by federalism. The federal government's powers are assigned by the Constitution, which restricts these formal responsibilities to quarantine and to funding medical services and a pharmaceutical benefits scheme (which includes vaccines). Public hospitals have remained the responsibility of each of the six states and two territories. This assignment of powers has been complicated by fiscal imbalances. While the states and territories administer the most expensive health services (hospitals) and manage public health, including infectious disease control, most taxation powers are held at federal level. This 'vertical fiscal imbalance' gives the federal level a strong but indirect influence across health policy as the state health systems depend on large fiscal transfers from the federal government. These funding splits cause considerable fragmentation of service delivery – the Federal government has sole responsibility for funding general practice (through the national Medicare program) and the states over acute services (through public hospitals) [9]. This has led to a politics of cost and blame shifting – both of which have featured in vaccine policy.

The Covid 19 crises tested Australia's health care state and created significant opportunities for change. Issues associated with vaccine development and roll out have highlighted some of the deep underlying characteristics of its health care state. The crisis has also provided the opportunity for market-based experimentation. Initial failures in vaccine roll out had their roots in both a long-established element (interest in some vaccine sovereignty) as well as deviations from established arrangements (the new public management model of service delivery pursued by a conservative Federal government in logistics and service delivery). Problems arising from these sources have been overcome by the deeper structures of 'agile stability' [10] embedded in public health systems run at State government level and the harnessing of the military's expertise in logistics management.

The paper is structured as follows. The next section provides a short overview of Australia's public health response to the initial stage of the pandemic. The following section outlines how Australia positioned itself to produce and procure vaccines from the earliest days of the crisis. The technology dimension of the Australian health care state has developed sophisticated means of procurement of pharmaceuticals, balanced with

some concern with nurturing some domestic production. The Federal government attempted to use the crisis to expand domestic manufacturing capability. This pursuit of 'vaccine sovereignty' ended up relying on CSL-Seqiris, the one major Australian-based and owned pharmaceutical company that was commissioned to supply the Astra-Zeneca (AZ) vaccine under licence. Some early adverse events – including deaths for some recipients of this vaccine - had an unsettling impact on an Australian population which, at the time, lived essentially Covid-free.

The focus on vaccine sovereignty had resulted in poor procurement decisions – and as a result major supply problems constrained the vaccine roll out. The following section outlines how problems from this source were compounded by the Federal government's commitment to breaking with the longstanding immunisation arrangements of the Australian health care state. The conservative Federal government favoured a 'new public management' model of service delivery which failed on nearly all counts. Success in vaccine rollouts came when the Federal government abandoned attempts to dominate implementation. Problems were overcome by relying on the deeper structures of 'agile stability' [10] embedded in public health systems run at State government level supported by logistics expertise provided by the military. The penultimate section reports on vaccine hesitancy and those left behind. While the rollout has been generally successful, vaccination rates amongst some disadvantaged groups (especially in some indigenous Australian communities) have lagged national averages. The paper concludes by drawing out the lessons of the Australian experience for the evolution of contemporary health care states. Amongst some researchers and policy makers, interest in increased use of competition and market models remains high. The experiment with outsourcing key parts of the pandemic response in Australia failed badly and the situation was only retrieved because of the underlying strength of agile stability embedded in established public sector and professional (non-market) structures.

Borders and lockdowns: the Australian public health response to Covid-19

The Covid pandemic forced into public view a part of the health system rarely visible beyond a specialist audience: that concerning the social determinants of health in general and public health in particular. In Australia bipartisan politics had nurtured a technically outstanding public health infrastructure. A World Health Organization Joint External Evaluation in 2017 noted a 'very high level of capacity' built on a 'comprehensive system of capabilities and functions to prepare, detect and respond to health security threats' [11]. The initial responses to the Covid challenge built on and affirmed those capabilities – resulting in Australia having one of the most successful records in avoiding widespread infection and death from COVID-19. As an island continent with no land borders, it was able to limit entry from the main sources of infection. Its federal system, often decried as a source of policy fragmentation, blame and risk shifting, responded well to the first wave of COVID-19. The Federal Government, after some false starts, blocked Australia from international travel. Arrivals from China ceased on 1 February 2020. Travel restrictions on the rest of the world, including Europe and the United States, were imposed on 20 March consolidating an approach Prime Minister Morrison called 'Fortress Australia' [12]. This was followed by State border closures, as jurisdictions tried to block the introduction of infection from neighbours. Along with other countries with similar geographies such as New Zealand, Singapore, Iceland, Taiwan, Japan, and South Korea (with its hard border with the north Australia was able successfully take advantage of natural borders to keep the virus at bay [13]. However, all of these struggled to find a strategy to move beyond suppression to a return to 'normality', after opening borders and economic activity.

Although the most significant powers over public health in Australia rest with the States, the Federal Government took a leadership role through previous pandemics. Australia's HIV-AIDS response in the

1980s was a model of nationally led and imaginative public health. A newly elected Labor Party government combined a bipartisan approach to national leadership, active cooperation with the States and active mobilisation of the Gay and Lesbian community to achieve one of the first successful campaigns to manage that crisis [14,15], and the H1N1 (swine flu) pandemic of 2009 saw swift local production of vaccines and mass immunization along with procurement of antivirals [16]. In both cases, the States were happy to accept the inclusive leadership offered by the Federal Government— a dominance helped by its vastly greater fiscal power – while the Federal government accepted that service delivery would be run by the states.

This strong national focus seemed apparent again in the COVID-19 crisis as, at federal initiative, national leadership was put on a wartime footing with a National Cabinet of heads of both levels of government, under prime ministerial leadership. National Cabinet provided a focus for leadership and a voice in policy for the States and territories, which control the public hospitals and most of the public health and police powers needed to control the pandemic. The Australian Health Protection Principal Committee (AHPPC), extended this federal dimension, bringing together State, territory, and national chief health officers to provide technical advice to National Cabinet. At the same time, the Federal Government launched an early, effective economic response, supporting workers displaced by COVID-19 lockdowns to prevent an economic collapse and underpin the lockdowns of economic activity which became a regular part of the States' public health response [17]. However, these measures seemed to exhaust Federal Government policy initiatives. State and territory led lockdowns, border closures and public health restrictions became the first, largely effective defensive line, shifting leadership to State and territory governments, with the Federal Government a powerless bystander.

Australia effectively eliminated the virus by the end of 2020, with one (by global standards) modest outbreak in Victoria the last holdout. However, regular disease outbreaks traced to leaky hotel quarantine were a reminder that borders could not be sealed forever. The only viable route beyond suppression lay in vaccination. This was not clear at the start of the pandemic. In April 2020 leading biomedical experts assembled by the Australian Academy of Science thought it unlikely that vaccines would be developed and approved for use until the last half of 2021 [18]. The success of vaccine development exceeded these expectations, and mass vaccination became central to planning for Australia's road out of COVID-19. The balance shifted back to the national level, where responsibility lies for approval and procurement of vaccines.

Governing technology: producing and procuring vaccines

Neutralising the threat of a looming public health crisis is one thing – governing a transition to a more sustainable order of things is another matter entirely. Moran's notion of the health care state highlights the three factors requiring consideration: matters of collective consumption, professional provision of services and technology. The precondition for even the possibility of successful transition from crisis management has turned on technology, in particular vaccine production and procurement.

Vaccine nationalism, or even 'vaccine sovereignty' have been political slogans of the pandemic [19,20]. Australia's vaccine strategy relied heavily on local development and production of vaccines. Vaccines are produced by one of the most globalised elements of the health sector – with UK and especially US based firms being particularly dominant [5, 21]. It is a domain in which Australia is a peripheral player, easily dismissed as a 'biomedical pygmy' [13]. Lacking a large pharmaceutical industry, Australia has been able to use the monopsonic buying power of the Pharmaceutical Benefits Scheme (PBS) to bargain with global pharmaceutical companies. To get their products subsidized through the PBS or National Immunization Program (NIP), pharmaceutical giants must submit to extended economic evaluation and hard bargaining over prices [22].

Australia's vaccine planning rested on this foundation. Since 1993, the National Immunisation Strategy and the National Partnership on Essential Vaccinations (2017) delineated clear responsibilities of Federal and State governments. At a national level, vaccines would be selected, approved through the Therapeutic Goods Agency (TGA), and evaluated by the Australian Technical Advisory Group on Immunisation (ATAGI), which decides on additions to the free National Immunisation Program (NIP) and sets clinical conditions on use.

Pandemic planning assumed a new variant of influenza was the most likely threat. The 2019 version of the Australian Health Management Plan for Pandemic Influenza set out that once the virus was identified, this would lead to 'Fast-track assessment and approval of the customised pandemic vaccine'. It stressed the need to build on existing governance structures rather than create new chains of command, requiring the 'use of existing systems and governance mechanisms as the basis of the response'. 'Pandemic vaccination campaigns will build on these seasonal immunisation systems and the community attitudes established under these programs' [23]. Covid-19 vaccines were assessed under a fast-track scheme, where the TGA granted provisional approval following assessment of all available clinical data, especially drawing on overseas experience and regulatory agencies.

In the COVID-19 crisis, the Federal government made a strategic choice to break from reliance on overseas suppliers and put its trust in local manufacture. The chaos and nationalism that dominated early vaccine production in the US and Europe justified this move towards a 'sovereign vaccine strategy' [24]. Two vaccines were targeted from the start, both of which were able to be manufactured in Australia. A vaccine jointly developed by the University of Queensland and CSL reached phase 1 trials in July 2020. This was abandoned in December as harmless HIV virus fragments used in its molecular clamp technology produced false positive reactions to tests for HIV. The second was from Oxford University and AstraZeneca. This overcame early problems in clinical trials to become an effective and low-priced candidate vaccine.

This strategy of self-sufficiency relied on CSL, the one Australian-based major vaccine manufacturer. With a market capitalization of over \$AU136 billion, CSL is the only Australian pharmaceutical company included in the Pharmaexec Top 50 list, with more than 13,000 employees in 27 countries [25]. CSL was a product of the Australian health care state. Founded in 1916 by the Federal Government, for most of its history it was a division of the Australian Department of Health, developing and manufacturing blood products, vaccines, and antibiotics [26]. Privatised in 1994, CSL built a massive global presence through mergers and acquisitions in Europe and the United States. The Federal Government continued to subsidize its Australian base by protecting an almost complete local monopoly on blood products. Vaccine supply chains are complex and multinational, without CSL's government backed capacity, Australia would have remained completely dependant on imports [27]. CSL's Seqirus subsidiary's vaccines have been the mainstay of Australia's annual immunization campaigns and exports to the Northern Hemisphere [28].

Australia's vaccine strategy leaned heavily on the security provided by this local industrial capacity and on well established, but tortuous processes used to approve new medicines and vaccines. New vaccines were first approved by the Federal government's advisory Therapeutic Goods Administration (TGA), using clinical trials evidence of safety and efficacy. Vaccines then went to the Australian Technical Advisory Group on Immunisation (ATAGI), which recommends whether they should be placed on the free National Immunisation Program (NIP).

Vaccine planning was led by the Federal Department of Health's COVID-19 Vaccine Strategy Taskforce Division, established by May 2020. Vaccines would be ordered, pending approval by the TGA and ATAGI. A Science and Industry Technical Advisory Group (SITAG) was appointed in August 2020 to advise on the purchase and the viability of local manufacture of vaccines. Eight of its members were federal public servants or members of existing advisory boards (such as ATAGI), five were from the pharmaceutical industry [29]. The Oxford AstraZeneca

vaccine was the preferred candidate because it could be produced in Australia. It had passed clinical trials in the UK and CSL, with substantial government funding, converted production facilities in Melbourne to make it under licence. Australia ordered 50 million doses, to be manufactured by CSL. On 21 March 2021 the Australian regulators approved its use [30].

Australia showed less interest in vaccines made overseas; including the mRNA vaccines produced by BioNTech Pfizer and Moderna that proved the success stories of the pandemic [31]. As early as July 2020 Pfizer requested for direct negotiations with the Minister for Health to arrange supplies for Australia. In a global atmosphere of panic, other countries, such as Israel and the United Kingdom, were ordering vaccines from every likely source without haggling over price. The federal Minister refused to meet directly with Pfizer, delegating this to a relatively junior bureaucrat and preparing for the usual slow process of haggling over price through the established regulatory agencies [32,33]. Australia was not alone in its reluctance to pursue Pfizer. The European Union also lagged in procurement, and was criticised for its bureaucratic processes, as though negotiating a trade treaty, at a time when other countries were treating vaccine procurement as an emergency. In contrast, the UK appointed a venture capitalist with unlimited funding, and bought large stocks over everything that was available. Israel paid a price for its Pfizer supplies in multiples of what its competitors were paying [19]. Australia ended up with a small initial order of 10 million doses of the BioNTech - Pfizer vaccine [34].

Even when Australia diversified with more orders of Pfizer and new orders of the Moderna (25 million doses) and Novavax vaccines (51 million doses) it kept the goal of 'vaccine sovereignty', pledging government resources to establishing Australian mRNA production capacities. But these came well into the program 25 million doses of Moderna were ordered in May 2021 for delivery in September [35].

CSL-Seqirus was set to produce enough AstraZeneca for Australia's needs. The supply end of the vaccine roll-out was disrupted by the discovery of adverse reactions, including deaths from rare side-effects of blood clotting. Poor and confusing communications from ATAGI, which set an age threshold of 50 for AstraZeneca, which was then raised to 60, then progressively lowered as a third wave of infections hit the larger States in mid-2021. The confusion was compounded as both the Prime Minister and Minister for Health suggested that the hesitant should wait until Pfizer vaccines arrived in quantity in late 2021. The Chief Medical Officer of the State of Queensland added more confusion by rejecting ATAGI's advice for wider use, warning that she did not want to see young people die from the vaccine. Governments gradually lowered the threshold for AstraZeneca, especially as a third wave of the Delta variant swept against the shaky public health defences of NSW and Victoria from mid-2021 [36]. However, the confused and changing communications from ATAGI and occasionally bizarre interpretations by health authorities encouraged vaccine hesitancy. Those unwilling or reluctant to be vaccinated rose from 26 to 36 per cent of the adult population between October 2020 and May 2021 [37].

The rollout: a non-linear path to (comparative) success

The initial plan for the rollout of the Covid 19 Vaccine built on established, highly successful practice. As noted above Australia has long experience of effective seasonal influenza immunization programs. Pandemic planning had assumed these would be used in a crisis – as during the 2009 pandemic [23]. With a clear division of labour, the Federal Government normally assumed the high-level policy tasks of identifying and approving vaccines, ordering (in large part from CSL), delivering to State vaccination centres, and maintaining the Australian Immunization Register. The States, with their emphasis on service delivery and local knowledge arranged distribution to general practice and community pharmacists, as well as running clinics and supplying more targeted services. These methods relied heavily on state and federal public sectors.

The November 2020 Covid-19 vaccination policy stressed similar 'clear lines of authority between governments' [38]. The national plan promised free vaccinations for all Australian residents by October 2021. A staged program would commence with priority population groups. The highest priority was given to aged and disability care residents and staff as well as front line health and quarantine workers, who would be covered by Easter 2021. Other priority groups would follow – the elderly and immune compromised, Aboriginal and Torres Strait Islanders aged over 55, and critical and high-risk workers. A second phase would cover all older people, and the remaining Indigenous population and high population risk groups. The remaining population would follow by the last half of 2021 [39].

Despite the mixture of misfortune and poor communication (the AstraZeneca blood clots) and poor management (the shortfall in Pfizer orders) the vaccine program was launched in February 2021. Implementation, however, was a problem from the start. The roots of this lay in the Federal Government attempt to bypass existing distribution channels based heavily on State-run public services by developing its own parallel channels using outsourced contractors. Its motivations were both ideological and more narrowly political. The Prime Minister asserted his belief that Australia 'is a can-do capitalism country, not a don't do government country' [40]. He and his Government were also frustrated that much of the credit for Australia's initial success in managing the pandemic was being attributed to State Premiers. Moreover, the one domain where there were many COVID-19 deaths – residents of aged care homes – was an area of federal policy responsibility. Putting a federal stamp on the roll out would help, it was assumed, lift the stature of the Prime Minister and his government.

The key elements of this new (ad hoc) institutional capacity were 'strategy consultants' for system design (e.g., McKinsey [41] and a host of 'private providers' of a wide range of activities associated with practicalities of the roll out. Overall program delivery was to be supported by PWC. Data based tracking and monitoring was to be provided by Accenture. Additional direct service delivery was to be provided by Aspen Medical, Health Care Australia, International SOS, and Sonic Clinical Services [42]. Very little information about these contracts were publicly available – with the formal announcement made on Christmas Eve [43]. Outsourcing for certain vaccination services such as building and maintaining a vaccine tracking system, was extended to the 'Big Four' consulting firms (PWC, EY, Deloitte and KPMG), again with little information for public scrutiny [44]. Dusevic [45] describes how, up to late April 2021 'From big pharma and budding medtechs, to providers of surge workforces, IT support, customer services, coronavirus testing and reserve army of bureaucratic brain power, corporate Australia has won more than \$10b in pandemic related contracts.'

This experiment failed. Critics have described Australia's initial vaccine 'stroll out' as 'the greatest public policy failure in recent Australian history' [46]. Failings in procurement, supply shortages and confused messaging combined to frustrate confident Federal government claims that mass vaccination had Australia 'ahead of the pack', ready to lead the world out of the pandemic. Having failed to meet an Easter target for coverage of aged care, Prime Minister Morrison declared 'It's not a race. It's not a competition for the sake of people's health – you get it right,' restating an equally unrealistic October deadline for population coverage [24]. Again, one of the starkest failures was in aged care. The Federal government assumed responsibility using in-reach (visiting) clinics, dedicated aged care vaccination hubs, and contracting aged care providers. The Australian government has not had recent experience of running health services on this level and scale, so the services relied on the newly created network of outsourced to private suppliers. An early scandal showed the difficulties of managing these interventions. The program started with only a small fraction of planned aged care visits completed. Health Care Australia, which had been contracted to deliver vaccination in aged care, suffered major embarrassment, and the resignation of its CEO when poorly trained staff administered the wrong dosage in an aged care home [47].

Unsurprisingly, by September Australia ranked 34th out of 38 OECD countries, in terms of proportion of the population vaccinated, long since eclipsed by Canada, the UK, and most Western European countries [48].

The problem did not lie in population hesitancy to vaccination. Despite a vocal minority of anti-vaxxers, some initial hesitancy was not rejection of vaccination, but stemmed from exaggerated concerns about the safety of the AstraZeneca vaccine. The Australian Department of Health’s regular survey of vaccine intentions found that in May 2021 only two-thirds of its sample intended to get vaccinated. By December this had risen to 90 per cent, an increase that matched rising levels of concern ‘about the general COVID-19 situation’ – overcoming doubts about the AstraZeneca vaccine - and the growing availability of the Pfizer alternative (Fig. 1). The Melbourne Institute Vaccine Tracker, which has surveyed levels of ‘hesitancy since October 2020, also found that those ‘not willing’ peaked in May 2021 at 18 per cent of the adult population, with ‘don’t knows’ at 13.1 per cent. Both fell steadily to 9.7 (unwilling) and 6.3 per cent (unsure) in September, although hesitancy remained slightly higher in states with very low infection rates (Western Australia, South Australia, and Queensland) [37].

Initially poorly vaccinated minority communities also proved to be victims of poor governance and logistics, rather than hostility to vaccination. The heavily immigrant, working class western suburbs of Sydney saw coverage move from less than half the adult population to more than 90 percent during the last half of 2021. Success here was achieved by health departments working with non-government, community agencies engaging hard to reach populations with customised outreach programs and ‘in place’ vaccination facilities housed in locations such as mosques [49,50]. There were some large zones of alarmingly low coverage, especially in Aboriginal communities in rural and remote areas. Low rates have been attributed to a younger population, further back in the rollout priority list, the confusion over AstraZeneca safety and a lack of supply of Pfizer vaccines. Some communities were susceptible to anti-vaccination messages especially from religious groups [51]. Aboriginal communities in rural Western New South Wales, such as Wilcannia were badly hit in the Delta outbreak. Vaccination drives were most successful where State health authorities worked closely with the established Aboriginal Community Controlled Health Services [52,53].

By December 2021, Australia had become the one of world’s better performing nations in terms of adult population vaccination rates [48]. Success was achieved by overcoming problems of supply and distribution by mobilizing deep public sector expertise from two sources – one

from within the established structures of the health care state, the other the military.

In April 2021 frustrated State governments stepped in to address the failings in direct service delivery by establishing a small number of large ‘industrial scale’ vaccination hubs in key centres, initially in Sydney, Melbourne, and Brisbane and subsequently in major regional centres [54–56]. Their formation had an immediate impact on increasing rates of vaccination in the Australian population. These trends are clearly apparent in Fig. 2 below.

To remedy failures in overall coordination the Federal Government drew on expertise from the armed forces. From March 2021 the Prime Minister was now flanked by uniformed senior officers at press conferences. There was some logic to this move, as the Australian Defence Forces (ADF) are the one section of the federal public sector at national level with deep expertise and capability in logistics and service delivery. At the same time, it was a major shift away from the civilian public services at Federal as well as State level. A Vaccine Operations Centre headed by a naval commodore was set up in April, with a vertical command structure using trucking companies to distribute vaccines to States, and general practice and other vaccination clinics, including the Federal government’s outsourced providers [57].

In June the struggling national vaccination program was relaunched as ‘Operation Covid Shield’, this time with a uniformed general in command. Partly a response to the logistic failings of the national campaign it again shifted away from the established (civilian) public health system, by-passing both the States and the Department of Health. General Frewen’s letter of appointment established a ‘direct command and control structure’ [58]. The new coordinator general would have ‘direct operational control of all relevant assets and resources across all Federal government departments and agencies engaged in the direction and implementation of the national Covid vaccination program’ with direct reporting lines to the Prime Minister and Minister for Health, cutting out the Health Department [59]. The language also became militarized, ‘positive public sentiment’ was seen as the ‘centre of gravity’ of the plan, defined as ‘the primary entity that possesses the inherent capability to achieve the desired end state’, the same terminology used in the Australian Defence Glossary [60].

As the year unfolded the federal vaccine delivery effort also shifted to more established means. General practitioners had complained bitterly about being marginalized. Their entry to the program from the end of March was limited and suffered from poorly planned deliveries. Provision by primary care (general practice and community pharmacies)

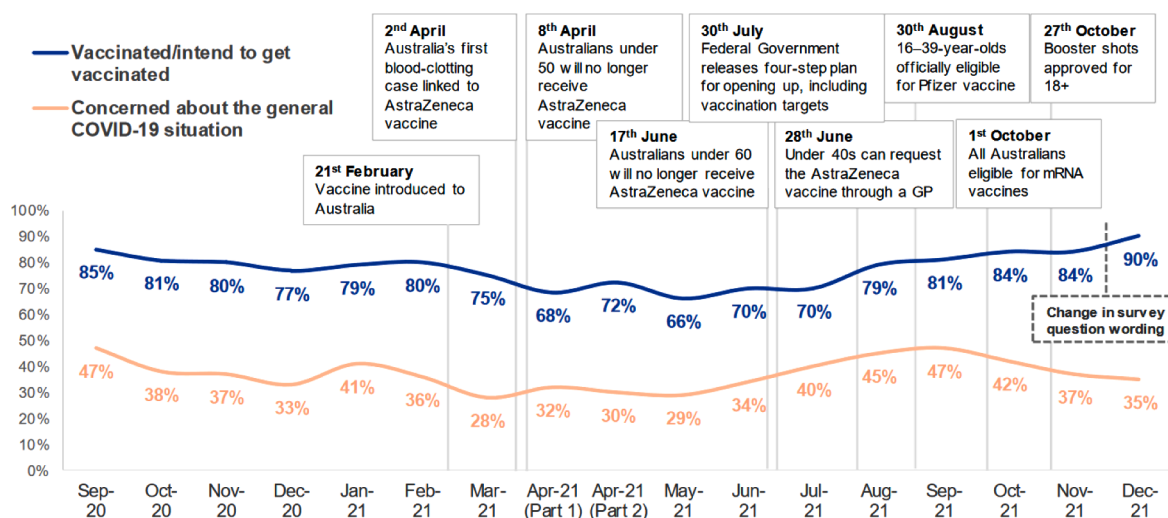


Fig. 1. Australia: Community Intentions to be vaccinated, Sept 2020-December 2021.

Source: Australia. Department of Health – Sentiment Towards COVID-19 Vaccine Research, December 2021, Quantum Market Research (Wave 15). <https://www.health.gov.au/sites/default/files/documents/2021/12/operation-covid-shield-covid-19-vaccine-sentiment-summary-december-2021.pdf>.

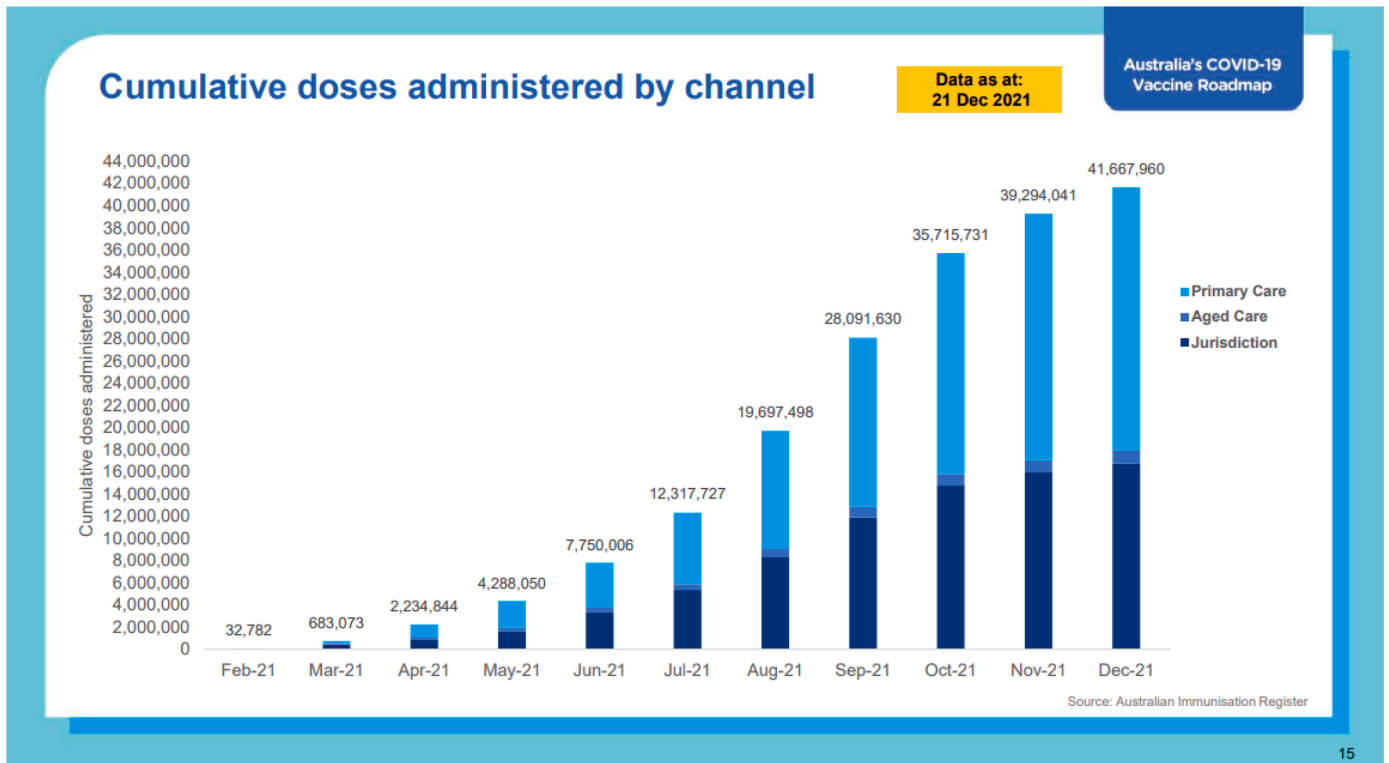


Fig. 2. Cumulative doses of Covid 19 Vaccine doses administered by channel Feb 2021 – Dec 2021 Australian Department of Health official data and visualisation. Source: Australian Government, Operational Covid Shield, Covid 19 Vaccine Roll-out, 22 December 2021, <https://www.health.gov.au/sites/default/files/documents/2021/12/covid-19-vaccine-rollout-update-22-december-2021-covid-19-vaccine-rollout-update-21-december-2021.pdf>.

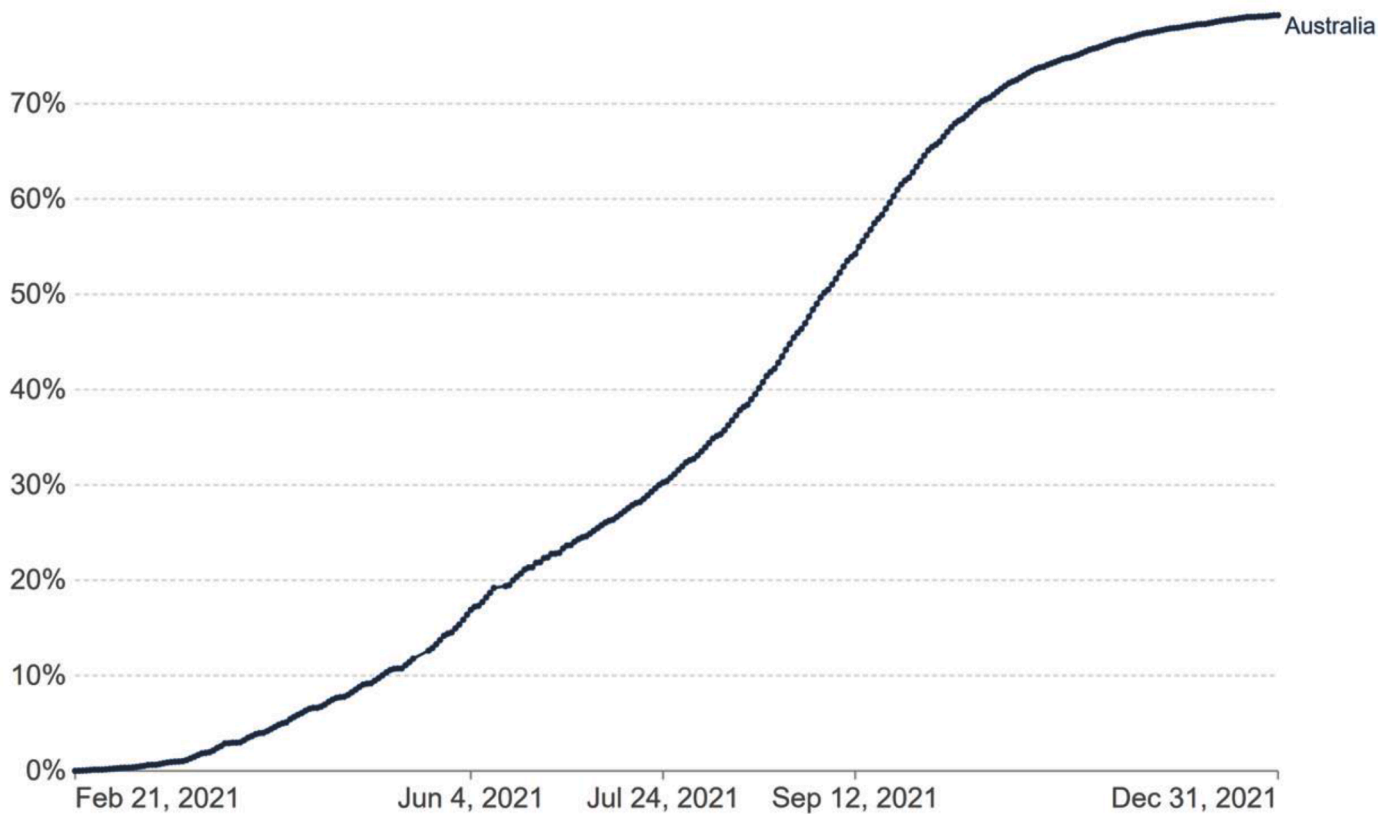


Fig. 3. Share of Australians who received at least one dose of COVID-19 vaccine, February-December 2021 (Per cent total population) OurWorldinData.org/coronavirus CC BY. Source: Official data collated by Our World in Data.

gradually improved (Fig. 2). By June supplies to general practice were flowing and pharmacies were also enrolled, delivering the Moderna vaccine (by September). The State and territory jurisdictions were running their own large vaccination hubs. By July 2021 the rollout was becoming more effective, reaching a peak after October when full supplies of all three vaccines were available (see Fig. 2).

The engagement of these core state capabilities steadily overcame the debacle that was the ‘outsourced’ vaccine rollout. By September 2021 the challenge of low supplies seemed almost over with acquisition of more Pfizer stocks through purchase and swaps with other nations. With a growing surplus of AstraZeneca, the problem was shifting to demand rather than supply. Distribution channels were expanding with a 1200 more GP clinics and 2000 pharmacies joining in October [61]. As Fig. 3 shows, national vaccine rates of over 85% of the adult population were rapidly achieved. At this point, however, the Federal government again stymied momentum. As Christmas approached in 2021 pressure from the Omicron variant mounted. In NSW, the most ‘laissez faire’ of the States, nearly all public health restriction were lifted in mid-December. Covid cases jumped from just on 500 daily cases on 7 December to 5517 a day two weeks later reached 21,151 daily cases by years end [62]. At the same time the Pharmacy Guild of Australia noted its capacity to help was receding. The Federal government cut payments for booster shots provided by community retail pharmacists from \$26 to \$16 per jab. As a result, the Guild reported the number of participating community pharmacies (officially termed ‘points of presence’) dropped from a high of 3500 administering primary doses, to 2000 for boosters and only 1300 signed up the childhood program slated to commence in early January 2022 [63].

It is important to note that the chance for serious innovation in using a different form of health expertise in the rollout was overlooked. The services of nurse practitioners were rejected under pressure from the Australian Medical Association. They were only permitted to administer vaccines if supervised by a general practitioner or “suitably qualified health professional” [64,65]. While the Federal government was prepared to experiment with novel market-based initiatives, in matters of professional based services it stubbornly preserved entrenched divisions of labour in the Australian health care state.

As has been the case throughout the pandemic Australia’s success can be attributed to the enduring legacies of health care state (supplemented with crisis logistics management from the military) all working despite the Federal government and its failed experiments in ‘market innovation’ launched during the crisis.

Conclusion

A central problem in any assessment of the Australian Covid-19 vaccination program is to separate out the short-time political noise from what it can tell us about the nature and adaptability of Australian health policy.

Australia’s experience with Covid-19 vaccines shows the importance of public sector leadership of public-private partnerships to manage the complexities of a modern health care state. Many of the problems arose when the Federal Government tried to follow its ideological preferences for outsourcing to commercial entities. The Federal government, has received extensive criticism throughout the Covid crisis for lack of leadership (blame shifting to the States) and penchant for an empty symbolic politics. Much of this criticism has been focused on the Prime Minister’s often partisan and short-term approach to policy questions [4, 66]. However, a deeper question of leadership concerns the functioning of the Australian healthcare state – the management of its complex articulation of public and private sectors. The core of that leadership concerns provision of a consistent capacity for agile stability (currently present in some State public health systems). Moran has argued that the complexities of the healthcare state require capacities of statecraft, political practice built around creative power-sharing/concertation with all key parties within the state and civil society as well as the economy

working effectively together within and between the domains of collective consumption, organisation of the professions and technology [5]. Several dynamic public-private arrangements underpinned the Australia’s achievement in vaccinating the vast bulk of its population to better manage the pandemic. Its most reliable vaccine supply came from the longstanding public sector connections with CSL. The ultimate success of the rollout came from established arrangements in managing public health supplemented by deep logistics management expertise provided by the military. By the end of 2021 it was the enduring features of Australia’s health care state that prevailed – for the benefit of the population.

The system proved resilient but moved on to the next set of pandemic related problems. Should the vaccinated be allowed greater freedoms to reflect lower levels of risk and to give incentives to the unvaccinated? How far could equality be stretched by vaccine passports and other privileges? Mandates to vaccinate health and aged care workers had proved slow to implement. The Business Council of Australia rejected employers requiring vaccination. However, several of its largest members – Qantas and the telecommunications company Telstra announced they would require workers to immunise [67].

There are no easy answers to questions such these. To date, however, the enduring features of Australia’s health care state, especially its trait of agile stability, have work well to not only manage a deep health challenge – they have also proved equal to correcting for ill-conceived ‘experiments’ in greater reliance on markets in the health domain. As the crisis unfolds it will be interesting to see if this capability is further developed or if political leaders, especially at national level, persist with experiments in placing great reliance on market (or commercial agents) to manage complex social and health problems for which to date they have proved entirely incapable of managing competently.

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None declared

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