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# Pandemic planning: data, information and evidence

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## ABSTRACT

In this article, we examine the role and effectiveness of the Centers for Disease Control and Prevention in the USA and Europe and consider possible lessons for future pandemic planning in Australia. We also 'map' the interjurisdictional communication pathways that have been secured since the election of the new Commonwealth government. We suggest a number of steps that could be taken to upgrade the collection, distribution, accessibility and timelines of key information required to improve pandemic management and national health outcomes. While it may be hard to contemplate a move to a fully integrated National capacity when we are only just emerging from the pandemic, we do have a unique opportunity to at least start the process of review. We should use the lessons we have learned to transform our systems, rather than 'tinker' with them and ensure we are better prepared for next time.

**Keywords:** CDC structure, COVID-19, health data, health governance, human resource management, jurisdictional decision-making, pandemic, pandemic responses.

## Introduction

Three years into the coronavirus disease 2019 (COVID-19) pandemic it is now clear that there are many weaknesses and disconnections within the jurisdictional decision-making arrangements which significantly impaired our national capacity to reliably detect and respond to this outbreak in a timely, effective and efficient manner.

A number of authors have recently described many of these fault lines[1–7] and it is apparent that the ongoing experience with the COVID-19 pandemic urgently requires reassessment and action for developing integrated national and international responses to pandemic planning and management capacity. Recognition of the need for basic reform, at least in areas such as communicable disease surveillance, interjurisdictional data integration and improved communication, is not new. This paper summarises some of the recent history of communicable disease governance and interjurisdictional challenges in our system and attempts to map the interjurisdictional communication pathways developed by the new Government.

A report submitted to the Australian Office of Health Protection in 2014[8] identified a raft of problems and advocated a range of steps to further integrate and streamline communicable disease management across the jurisdictions. Similarly, the Australian Medical Association published a position paper in 2017[9] advocating the creation of an Australian Centre for Disease Control (CDC). While to date no Australian CDC exists, recent circulation of a discussion paper outlining plans for the development of an Australian CDC are to be welcomed.[10]

In 2021, the Royal Commission into Aged Care Quality and Safety published a report on the sorry state of aged care ('Neglect'), highlighting issues of lack of integration of services and communication at many levels. Throughout the pandemic, the breakout of disease in residential age care facilitates has been widely reported, as has the increased mortality that is age related.[11]

Over the past few years, the difficulties in managing a pandemic across nine jurisdictions has reinforced the case for review and reform. It has also highlighted the lack of strategic leadership and the separation, isolation and disintegration of evidenced based, agreed and efficient policy making at heads of government level. To achieve a more

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integrated national policy approach and associated plans, the integrity, span, transparency, access and trust across jurisdictional communication platforms has to be reviewed, rebuilt and repaired. Such an outcome can only be achieved by formal health policy declaration(s), bipartisan commitment and sufficient resource allocation to drive the development and implementation of such communication and operation support systems.

This need for reform of national communicable disease control and management has now been revisited by the Commonwealth Department of Health and Ageing via the recent release of a discussion paper, 'Roles and Functions of an Australian CDC'.[10] It is a thorough and well documented consultative overview and will no doubt form the basis of much discussion and negotiation as to how to better manage the interjurisdictional matrix of communicable disease management for some time. However, the difficulties of achieving actual reform will always be about agreeing reform priorities, pace of change, operational delegation and funding. Building on top of the current architecture may not be the best approach.

## Evidence, opinion, media and politics

Although the need for implementation of a national communicable disease and pandemic planning framework might seem clear during times of obvious community morbidity and mortality, realistically, once the risk of individual and social jeopardy decreases, so it seems, does the focus and impetus for reform. Governments have many conflicting priorities and unfortunately little appetite for structural changes, which would be time consuming and difficult to negotiate and legislate. Furthermore, a major lesson of the pandemic is that over the past decade, the separation between evidence, opinion and political expediency has become much weaker. As the health instrumentalities have become more 'siloed', the polity has also become more partisan with policy being influenced by social and other media outlets that portray experts as elites and advocate for 'alternate facts' and opinions in the name of 'balance'. The multimedia push and resultant political support for untested treatments, such as ivermectin and hydroxychloroquine, impacted significantly on the ability to develop an evidence-based approach to such treatments by health professionals.

In this complex and fast-moving mix of challenged data, many loud and conflicting voices, political gaming, daily media opinion and narrow casting, it is little wonder that the clamour for maintenance of 'individual rights and freedoms' threatens to overwhelm the tried and tested public health messaging and interventions of previous decades. Even now, deep state theorists, antivaxxers, pandemic deniers, quack remedy peddlers and political opportunists continue to have a loud and sometimes disproportionate presence in some media outlets, internet channels and within the extremes of the populist political spectrum.

In a Leader in *The Lancet* (17 July 2020), WHO Director General Tedros Adhanom Ghebreyesus is reported as stating at the Munich Security Conference:

> 'we're not just fighting a pandemic; we're fighting an infodemic'.[12]

*The Lancet* Leader goes on to comment:

> Fake news, misinformation and conspiracy theories have become prevalent in the age of social media and have skyrocketed since the beginning of the Covid-19 pandemic. This situation is extremely concerning because it undermines trust in institutions and programs.

Furthermore, the article then mentions that WHO has formally begun a conversation on the global effects and management of infodemics with its first Infoepidemiology Conference held on29 June 2020.

## Centres for Disease Control

It is therefore instructive to assess the performance of the two most famous and influential international CDCs, the Centers for Disease Control and Prevention (CDCP; Atlanta, USA) and the European Centre for Disease Prevention and Control (ECDC, Sweden) during the pandemic. What difference did they make to the trajectory and outcomes of the pandemic within their jurisdictions? It is also worth remembering that early on, the origin and cause of the disease was shrouded in mystery and confusion. Nevertheless, it might have been expected that CDCs would provide early, timely and reliable information to address the outbreak and update and modify this information as needed. That is, provide 'gold standard' evidenced-based advice and communications services for use by governments and the health system to limit the damage of the pandemic. Recently, both CDCs have undergone performance reviews and unfortunately it is reported that *inter alia*, their impact on shaping and influencing the early and ongoing responses to the pandemic was somewhat poor and ineffectual.[13,14] The CDCP reviews validate widespread criticism about data collection, reliability and interpretation, confused messaging and inadequate timeliness.[14] It has been reported that the effectiveness of the CDCP was also diminished by the sheer size of the organisation, its multifaceted roles and number of bureaucracies and spokes people. Effectiveness and trust in messaging were also tested by way of administrative and political pressure to control data flow and content that could be used to support a particular posture or direction (e.g., the safety of early opening of schools).[15] In response and in anticipation of the release of the Review, the CDCP Director, Dr Rochelle P. Walensky, said in a statement:[16]

> For 75 years, CDC and public health have been preparing for COVID-19, and in our big moment, our performance

did not reliably meet expectations,'... 'The C.D.C. must refocus itself on public health needs, respond much faster to emergencies and outbreaks of disease, and provide information in a way that ordinary people and state and local health authorities can understand and put to use' and concluded; 'My goal is a new, public health, action-oriented culture at C.D.C. that emphasises accountability, collaboration, communication and timeliness.

The European CDC is markedly different to the CDCP. It was created as a European Agency in 2004 in response to the international severe acute respiratory sydrome (SARS-02) outbreak with the aim to 'identify, assess and communicate current and emerging threats to human health from communicable diseases'.[17,18]

Compared to the CDCP, it has a much more limited scope, role and budget and has no legislated authority over member states. Accordingly, throughout the pandemic its role has been much more passive, providing reliable status reports and updates. Nevertheless, it has been largely sidelined by individual European member states with regard to public health policy decisions and local interventions and actions.[18]

Perhaps the lesson here is that the existing, high profile CDC models are really not suited to the new turbulent, rapidly evolving and mixed environments and perhaps the best way to improve future pandemic outcomes in Australia would be to focus on two key areas.

First, there needs to be a clear commitment by the National Cabinet for the need to review and restructure national policy, legislation and regulations relating to inter-jurisdictional pandemic communications and responses. Second, as part of this commitment, there needs to be an early review of existing jurisdictional communicable diseases frameworks and reporting capacity, as well as an agreed plan for the implementation of a national entity that provides integrated, rapid, reliable surveillance and outbreak information/advice, which is easily accessed by jurisdictional decision makers and operatives, state health systems and community practitioners and of course, the public.

In other words, address the most obvious domestic system weaknesses and failures of the past few years and as part of this process, adopt the lessons learnt by the CDCP and the ECDC to begin building a national 'cooperative' for communicable disease prevention (NCCDP) –surveillance, assessment, reporting and advice (SARA).

## The new roadmap

The pandemic has already driven structural change at the highest levels of interjurisdictional governance arrangements. The peak bodies now are the National Cabinet,[19] the Health Ministers' Meeting (HMM)[20] and the Health Chief Executive Forum (HCEF).[21] All political heads of jurisdictions and all departmental health Chief Executive Officers are represented in this linked structure. Furthermore, the Australian Minister for Health has potentially almost unlimited power for national intervention under the Biosecurity Act (2015),[22] including:

- setting requirements to regulate or restrict the movement of persons, goods, or conveyances
- requiring places be evacuated
- making directions to close premises.

There are seven national bodies that report to the HMM, including the Australian Institute of Health and Welfare, the Australian Digital Health Agency and the National Blood Authority. Also working with the HMM is the Health National Cabinet Review Committee (HNCRC); a National Cabinet committee which; 'undertakes specific, time-limited tasks assigned directly by the National Cabinet on matters of national significance to align national priorities and achieve complementary work programs'.[23] There does seem to be a renewed level of trust and confidence in these arrangements. On 17 September 2022, the National Health Reform Agreement – Long Term Reforms Roadmap was endorsed by all Australian Health Ministers at the HMM.[24] This Addendum to National Health Reform Agreement (NHRA) 'aims to improve health outcomes for all Australians and ensure our health system is sustainable. Commonwealth, State and Territory governments, as parties to the NHRA, are committed to a shared long-term vision for health reform'.[24] Under the Roadmap (2020–25) actions deliverables and timeframes are described for seven key areas of reform, i.e.

- nationally cohesive Health Technology Assessment
- paying for value and outcomes
- joint planning and funding at a local level
- empowering people through health literacy
- prevention and wellbeing
- enhanced health data
- interfaces between health, disability and aged care systems.

Although pandemic planning is not specifically mentioned, the roadmap contains all the reform elements needed to support the implementation of a NCCDP with perhaps early focus on streamlining SARA. Clearly the Roadmap will need to dovetail with the more recent discussion paper 'Roles and Functions of an Australian CDC'.[10]

## Towards standardised information systems

The concept of an NCCDP is relatively simple and a final configuration could be based on the best elements of the CDCP and the ECDC. As with other national bodies, such as the National Blood Authority, a NCCDP would need to have a legislative foundation with an agreed budget. It would not need to be involved in direct operations support but provide the

systems, data and communications to optimise jurisdictional and local responses on the ground. A key component might be the early deployment of a national, standardised information and communications technology system to provide timely and accurate SARA communication. Such a system could also be the foundation for a national track and trace system and provide support for more timely purchasing decisions as the characteristics of outbreaks become more readily apparent.

As with any major reform and implementation process, old structures and relationships would be challenged. All nine jurisdictions have their own communicable disease frameworks and the identification, review and restructuring of the existing jurisdictional functionality would be a significant and difficult task.

## The matrix

### Current state

The peak of this complex interjurisdictional matrix is the Australian Health Protection Principal Committee (AHPPC) and is chaired by the Australian Chief Health Officer. The AHPCC provides the national consultative forum for all jurisdictional Chief Health Officers and is tasked with providing advice to the National Cabinet on health protection in the context of emerging health threats, infectious diseases, environmental health and natural disasters.[25] The AHPPC also provides strategic direction and support to five standing committees

- Communicable Diseases Network Australia (CDNA)
- National Health Emergency Management Standing Committee (NHEMS) Public Health Laboratory Network (PHLN)
- Environmental Health Standing Committee (enHealth)
- Blood Borne Viruses and Sexually Transmitted Infections Standing Committee (BBVSS).

As of November 2020, it also oversees one time-limited advisory group, the Aged Care Advisory Group. The CDNA has seven subcommittees and panels, enHealth has four reference panels. Each of these networks, committees, subcommittees, working groups and panels require operational and financial support, which is provided by the Australian Department of Health and Aged Care. It is beyond the scope of this paper to map the expertise and resources engaged in the States and Territories but they are no doubt significant. As with all the components of the AHPPC, it would seem to be advantageous that these linkages and operational practices be evaluated as part of any structural reform.

### Reporting of disease

The experience and lessons of the past 3 years clearly demonstrate the need to better prepare and manage communicable disease emergencies. Of particular concern is the need for accurate, timely and relevant information be made available to all levels of decision makers. In this regard, an early and achievable first step may be the review and reform of the CDNA, its component parts and operational methodology. For example, how could the National Notifiable Diseases Surveillance System (NNDSS)[26] be strengthened and streamlined?

Currently, the CDNA uses specialised working parties to develop surveillance case definitions for all nationally notifiable diseases and review existing ones if required. The process includes consultation with the Public Health Laboratory Network (PHLN) and once a recommendation is brought forward and confirmed by the CDNA, then State and territory health departments **may** use these definitions to decide whether to report a case to the NNDSS. There are also some questions about the nature of the data collections and it is telling that the NNDSS website points out:

> The quality and completeness of the information we receive varies because notifications come from various sources, including clinicians, laboratories and Hospitals States and Territories have different ways for these sources to report cases some people may choose to not provide all relevant information to health authorities.[26]

These processes and the ‘opt on’ nature of the data reporting may not be the best practice required for accurate, timely and accessible information in times of the plague.

This is an opportunity for our jurisdictional leaders to take some simple first steps towards NCCDP and SARA.

Transparency of policy and procedures is paramount.

The newly elected government has recently commissioned an enquiry into the regulatory shortfalls and lack of transparency of the process for appointment of Ministers, as well as a Royal Commission into the Robodebt Scheme[27] to help us to better understand the extent of hidden human causalities and suffering affected by the Robodebt scheme. These enquiries will also surely provide stronger governance and transparency for decision making and adherence to the law by both politicians and public servants, than has been seen recently. Even though there is no reliable estimate of the unnecessary morbidity and mortality related to the inadequacies of many policy and operational aspects the COVID-19 pandemic responses, we need to learn from the mistakes and prepare a more interactive and sustainable framework to limit the casualties of next pandemic.

Finally, we need to be cognisant of our membership of the WHO and the recent decision of the 194 Member States of WHO ‘to begin the process of drafting and negotiating a convention, agreement or other international instrument under the Constitution of the WHO to strengthen pandemic prevention, preparedness and response’.[28]

While these negotiations may result in amendments to International Health Regulations (IHR) they act as a guide

with Article 3.4 making it clear that individual countries have 'sovereign rights under the UN Charter to legislate and implement legislation in pursuance of their own policies.'

The Commonwealth Discussion paper is a very positive step forward but during the widespread consultative processes now being undertaken, we must be mindful of the danger of losing focus on the urgency of key operational changes and priorities, especially data and information management reform.

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