Role and Functions of an Australian Centre for Disease Control

Prevention-Promotion-Protection

Consultation paper – November 2022

Foreword

Minister for Health and Aged Care, The Hon Mark Butler MP

The Australian Government is delivering on its election commitment to establish a world-class Centre for Disease Control – or CDC – within its first term in office.

This is not before time: Australia is the only country in the OECD without a CDC, or an equivalent organisation.

The COVID-19 pandemic has clearly demonstrated that Australia needs to be better prepared, both for future pandemics and the other varied health threats our country will face in the 21st century.

The CDC will provide a national focal point for disease management to improve Australia's capability and address weaknesses in our ability to respond to health emergencies and other public health challenges.

It is time to consider how a national coordinated body, led by dedicated experts, can make a difference to our emergency response and our ability to protect and promote the health and wellbeing of all Australians.

We have gained new perspectives and learnt much during the COVID-19 pandemic, including the importance of having a surge capacity for our public health workforce, the breadth of human impact that accompanies major interventions such as lockdowns, and the vital need for timely and consistent national data.

The Government has committed that the CDC's focus will be on ensuring Australia is prepared for future pandemics. It will lead the national response to future infectious disease outbreaks and work to prevent both communicable (infectious) and non-communicable (chronic) diseases.

It will take an "all hazards" approach to strengthening Australia's ability to respond to a range of public health threats – both natural and those created by humankind.

The Government has not made any firm decisions about the model for Australia's CDC. Extensive consultations will be held across the country to inform the Government's decision-making in this regard.

To guide the consultation process, the Department of Health and Aged Care has undertaken preliminary scoping work that has underpinned this paper.

Given the broad range of complex capabilities that may be incorporated into the CDC, it is likely to be established over several phases.

It's anticipated the first phase to establish the CDC will occur from early 2024. This will occur in close collaboration with the states and territories – and other key stakeholders.

The initial focus will be on further building up the National Medical Stockpile; undertaking communicable disease surveillance, prevention and response; and arranging greater data sharing and data linkage, both nationally and between jurisdictions.

This consultation process seeks to determine the possible roles and functions of the CDC – specifically, what components should be incorporated into phase one, and which elements may require further consultation and work to be incorporated in a later phase.

It is important that the CDC doesn't replicate existing functions, but instead utilises, connects with, and builds upon what we already have.

The legal structure of the CDC will be a decision of Government and is not part of this consultation process. However, I am seeking your input – as experts in your field and as members of our dedicated public health workforce – on other aspects.

I hope you share my excitement at the opportunity presented by the establishment of the CDC.

When you have the opportunity to do so, I encourage you to contribute your thoughts and ideas so that together we can best protect the health and wellbeing of Australians and safeguard our national community now and into the future.

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Introduction

Australia's public health capability is strong – it has managed numerous ongoing health threats and seen us through a number of epidemics and pandemics over the years. However, the world is continuing to change and so must we with it. While Australia has been more successful than many other countries in responding to certain health threats, what has become clear is that our national approach to public health has significant gaps that should be filled – if we are to confidently face the challenges that lie ahead.

Prompted by the COVID-19 pandemic, our international counterparts are moving forward with plans to revitalise or establish their own public health agencies. The US Centers for Disease Control and Prevention (US CDC) is undergoing major changes to its structure and systems with a focus on public health action emphasising accountability, collaboration, communication and timeliness. It is moving away from its current, more academic approach and towards rapid risk assessment leading to emergency and public health response. Singapore and New Zealand are establishing their own new public health agencies.

The pandemic has been a prompt to address the key issues and improve on our existing systems – it is a clarion call to do better. Opportunities for change and improvement in Australia include:

- developing a robust, centralised and coordinated national approach to all aspects of public health in Australia, including threats to human health, accounting for the interaction between humans, animals and the environment.
- increasing capacity and capability in the public health workforce during times of crises and pressure, particularly in relation to skills integral for emergency response such as contact tracing, laboratory analysis and infection, prevention and control.
- strengthening leadership on key public health issues – from preventive health to environmental hazards.
- strengthening timely, trusted, consistent and clear national public health advice and guidance – particularly that is responsive to emerging threats and needs, and
- developing national data systems and management which meet national and jurisdictional needs for informing timely, adequate and efficient health responses across all hazards, and that link into international partnerships and collaboration.

For many of those who work in Australia's public health sector, this will not be a revelation. The COVID-19 pandemic has certainly brought many of these issues to the front of government, academic and public consciousness. But for epidemiologists, public health clinicians across the human and animal sectors, environmental health officers, communicators and so many others – it is confirmation that while our approach is not broken, we need to evaluate and address the shortcomings.

In response to these, the Government has committed to improving pandemic preparedness and response by establishing an Australian Centre for Disease Control (CDC) that would: [1]

- ensure ongoing pandemic preparedness.

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[1] A Albanese and C Bowen, *Safeguarding our future with an Australian CDC* [media release], Labor Party, 5 October 2020, accessed 18 October 2022.

- lead the national response to future infectious disease outbreaks' and
- work to prevent non-communicable (chronic) and communicable (infectious) diseases.

Establishing a networked CDC or public health agency could:

- enhance Australia's existing public health response mechanisms.
- improve preparedness for the next pandemic and other health emergencies.
- boost response capacity, and
- strengthen prevention, communication and national coordination and enhance collaboration across all levels of government.

Such an approach has also been recommended by the Senate Select Committee on COVID-19[2] and a recently published independent review into our pandemic response.[3] In particular, strong partnerships from the outset with state and territory governments, and drawing on a variety of disciplines, will be key to an effective CDC.

The CDC could be the focal point for all aspects of public health and would work with states and territories to monitor, protect, improve and promote the health of Australians. An ideal federated model would go further – through a strong federal focal point and affiliated, integrated state and territory nodes – with the CDC presence in all jurisdictions collaborating to meet common national objectives.

With heightened public expectations and awareness of the importance of health emergency response capability and public health resourcing, there is an opportunity to capitalise on the lessons from the COVID-19 response and other recent emergencies to create a new flagship hub that ensures Australia's preparedness and response, and our contribution to global preparedness, is world leading.

While the CDC will be part of the Australian Government in some form, no other firm decisions have been made relating to its structure or governance. The purpose of this discussion paper is to guide development of the purpose, scope and functions of the CDC as part of a targeted consultation process. It provides draft mission and purpose statements for the CDC, an outline of its potential scope of functions, examples of how it could improve public health in Australia, and principles guiding its design.

Throughout the paper, key questions have been included to aid in guiding written input to the consultation process. These have been provided in full at **Appendix A**.

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[2] Senate Select Committee on COVID-19. (2022). Final Report. Available at: https://parlinfo.aph.gov.au/parlInfo/download/committees/reportsen/024920/toc_pdf/Finalreport.pdf;fileType=application%2Fpdf. Accessed 2 November 2022

[3] Shergold, Peter AC et.al. (2022). Fault Lines: An independent review into Australia's response to COVID-19. Available at https://www.e61.in/faultlines, Accessed 24 October 2022

Public Health in Australia

The Australian public health landscape is a complex, interconnected network of people and organisations. While health services are the essential core of the sector, the landscape is much broader and includes research and education, governments and regulators, employers, individuals, and others (**Figure 1).** How Australians participate in and benefit from the public health sector is heavily influenced by the wider determinants of health. These determinants further broaden the range of people and organisations that either directly or indirectly influence or are influenced by the public health landscape.

The main functions of public health include determining the distribution and determinants of disease in populations and working to prevent disease and its impacts, and to protect and improve the health of the whole community. This includes communicable diseases, non-communicable diseases, short-term health impacts of diseases and conditions resulting from earlier infection or injury.

Australia's federated system of government means that responsibility for public health (including disease prevention) is shared across Australian, state, territory and local governments, industries, non-government organisations, employers and individuals. This model means that data is also collected and held across these groups.

COVID-19 brought public attention to the complex, diverse and devolved nature of the public health sector in Australia. While Australia's management of the pandemic was one of the strongest by international standards across several metrics,[4] the impacts of the pandemic on Australia were nevertheless extensive and unprecedented in modern society. Public health interventions were, at times, inconsistently applied across the states and territories, leading to some confusion in the eyes of the public and criticism of a lack of a unified approach. Furthermore, the impacts across the population were not equal, with some population groups such as older Australians, people living with a disability, First Nations people, cultural and linguistically diverse groups and socio-economically disadvantaged groups affected to a greater extent than the general public. Other population groups have also been shown to be disproportionately affected by disease, such as the evidence for the increased impacts of Long-COVID among women. The evidence is also clear that there was a significant impact on mental health across the entire population during the pandemic.[5]

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[4] Organisation for Economic Co-operation and Development (OECD), *OECD COVID-19 Recovery Dashboard*, OECD website, n.d., accessed 14 October 2022.

[5] Australian Institute for Health and Welfare (AIHW). Mental health impact of COVID-19. Web report, 26 August 2022, accessed 27 October 2022

Figure 1. Australia's public health landscape

Figure 1. Australia's public health landscape
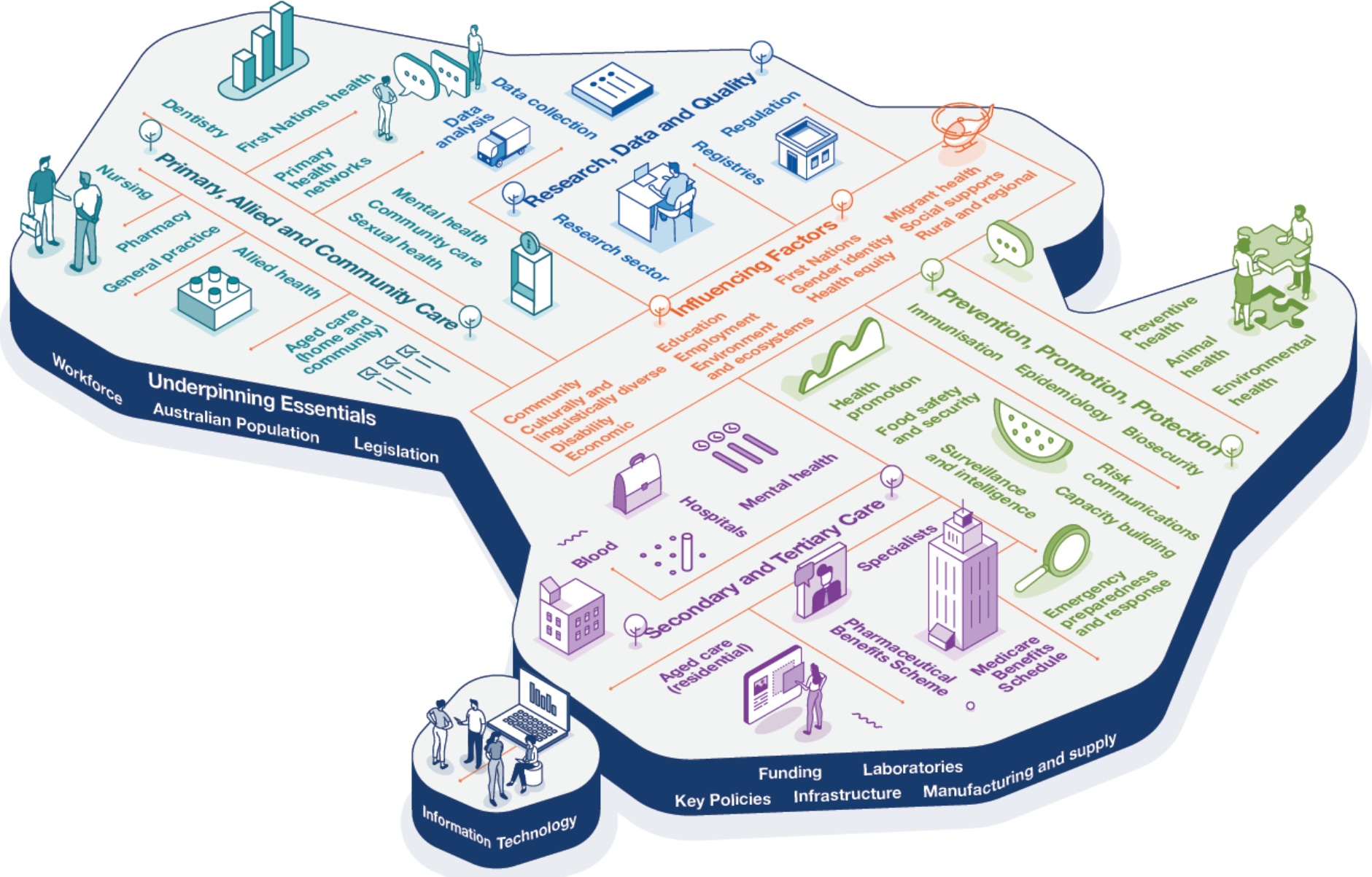
CDC Design Principles

The department has developed draft principles to guide the design and foundations for the CDC. The principles are intended to provide overarching strategic direction for the design of the CDC and be the foundation for consultation and negotiation.

1. **Fit-for-purpose for a federated system**. State and territory governments are primarily responsible for public health and emergency response. The CDC could provide national leadership and coordination in identified areas, but it would not replace or undermine the existing responsibilities for public health in the states and territories. Rather, the CDC provides an opportunity to boost the public health capabilities of the Australian Government and states and territories. In addition, the CDC should aim to establish early and permanent linkages with the broader public health sector in Australia, including those areas outside of its core functions, to ensure effectiveness of preparedness and response.

2. **Improved pandemic preparedness**. The commitment to establish the CDC arose in the context of Australia's response to the COVID-19 pandemic. An Australian CDC must, as its first priority, position Australia to be in a strong position to prevent, detect early and respond to future pandemics and communicable disease outbreaks of national significance. To do this effectively, a One Health approach should be implemented across the functions and scope of the CDC.

3. **'All hazards' approach.** Public health is threatened by a range of hazards such as communicable diseases, non-communicable diseases, chemical, biological and radiological exposure, terrorism events, and environmental hazards, including the health effects of climate change. When determining the scope of the CDC, priority should be given to public health measures and achieving positive outcomes; the source of the public health threat should not be the determining factor.

4. **The CDC should be a trusted, national source of information and advice, underpinned by effective governance, and certainty of funding.** Community trust in evidence-based, expert advice is essential for effective public health intervention. The governance arrangements for the CDC must ensure confidence and trust from the Australian people and the international public health community (led by the World Health Organization).

5. **Access to quality data for decision and policy making.** A key lesson from the COVID-19 response is that access to integrated, accurate, timely, national data is essential for decision and policy making. The CDC should provide the focal point of disease surveillance data; coordination of laboratory data collection, reporting and analysis; and the synthesis of evidence-based policy advice.

6. **Avoid duplication and maximise efficiencies.** The CDC should build on Australia's existing strengths and capabilities. The design of the CDC should seek to avoid duplication of functions across the Australian Government and between different levels of government. The CDC must improve data and operational efficiencies for the Australian, state and territory governments so that their individual investments in public health achieve greater outcomes.

7. **Success through co-design and consultation.** State and territory governments have responsibility for public health in their jurisdictions, so they will be essential partners in the design of the CDC. The design of the CDC will also be informed by thorough consultation with interest groups and professional bodies.

Strategic Intent

Draft mission and purpose statements are presented below to provide a context for discussion on the gaps the CDC is seeking to fill, benefits, and functions it could undertake.

DRAFT MISSION STATEMENT

The CDC's mission is to drive better health outcomes for all Australians and protect our country from nationally significant health threats that we face into the future. Adopting an "all hazards" approach, as the nation's leader in health protection, prevention and promotion, the CDC will safeguard our community from communicable and non-communicable diseases at home and abroad and prepare for and respond to incidents that threaten the health of our population.

The work of the CDC will be underpinned by the guiding principle of One Health – recognising the connection that exists between the health of people, animals and the environment.

The CDC will work closely with other Australian, state and territory agencies, the broader health system, research institutions, industry, key stakeholders and with international counterparts, to deliver the best public health outcomes nationally and globally.

The CDC will strive to achieve health equity with a focus on eliminating preventable health disparities, and will work in partnership with affected communities, particularly those experiencing greater inequity in outcomes, to ensure their voices are included in its direction, priorities and policies. This will include alignment with and incorporation of the Closing the Gap reform priorities in all aspects of the CDC's work.

The CDC will take a multidisciplinary approach, recognising the need to draw on the knowledge, skills and expertise of people working in a range of fields to deliver the best health outcomes, and will work to capitalise on existing functions and delivery mechanisms.

DRAFT PURPOSE

Protect – prevent, prepare, forecast, detect, and respond to new, existing and re-emerging health threats utilising an "all hazards approach", underpinned by the principles of One Health

Gather and Analyse – harmonise, collect, manage and analyse crucial data across a number of sectors by establishing robust national surveillance systems, accessing existing data collections, utilising data linkage agencies and connecting to international intelligence networks

Guide and Communicate – deliver trusted, timely and comprehensive national guidance on public health issues to the population, governments, health professionals (both for people and animals) and the global community, and utilise their expertise to promote healthy and safe behaviours

Lead – provide national and international leadership on nationally significant health threats by establishing a network of key stakeholders to drive positive outcomes for all Australians

Cooperate – increase our levels of cooperation and collaboration across domestic and international borders on significant health matters through the exchange of intelligence, data, ideas, and information, and by strengthening regional and global health preparedness. The CDC will form strong connections across the broader health system, including primary care, to ensure that our responses are efficient and effective, both in peace time and emergencies

Prioritise – strengthen the contributions of research and technology by influencing national prioritisation of timely policy and program-relevant public health and medical research

Develop – grow our public health capacity by nurturing Australia's future public health workforce and leaders through enhancing existing education pathways, establishing national emergency response training, and continuing to monitor gaps in public health training and workforce capacity

Functions of the CDC

Internationally, public health agencies have common roles including creating, interpreting and assimilating evidence, health promotion, disease prevention and control, providing expert advice to policy makers, and designing, implementing and evaluating public health programs. Across different organisations, this list can also grow to include providing emergency response capabilities, educating the health and scientific workforce, establishing guidelines and regulation of chemicals and medicines, and operating complex disease surveillance systems with corresponding data evaluation and analysis capabilities.

While there are many possibilities, they come at a cost. Whatever functions are included in the scope of the CDC will require a budget necessary to successfully undertake them, as demonstrated by the experience of our international counterparts in **Appendix B.** The design of the CDC will need to strike the right balance across all considerations. In addition, there will be some limits in terms of feasibility and timing.

COVID-19 has revealed opportunities to strengthen public health in Australia, including management of communicable and non-communicable diseases. The complexity of the public health landscape and the widespread implications of change necessitate careful review, consideration, and consultation to effectively address identified gaps, consolidate strengths, and harness new opportunities.

While no firm decisions have been made regarding what is in scope for the CDC, there are limitations that have been defined through the mission and purpose statement around functions that are not in scope of the CDC.

Establishing the CDC provides an opportunity to strengthen national coordination, enable consolidation of federal public health responsibilities, and provide a platform for an "all hazards" approach to national policy and advice on public health. This is an expansive view and covers a vast number of possible operations.

The scope of the CDC must achieve its mission and purpose and should reflect key design principles including avoiding duplication and maximising efficiencies. The CDC is not intended to absorb, replace, or supersede responsibilities of state, territory and local governments that are not within the constitutional remit of the Australian Government. In addition, the CDC is not intended to replace other existing models where there is already national legislation and coordination at Australian, state and territory levels (for example, work health and safety). The CDC should, however, work closely with state and territory public health authorities to support and coordinate existing efforts. In addition, it will be key for the CDC to work in partnership with all areas impacting human health across governments, to ensure that day to day functions and emergency responses are linked in and coordinated.

Public health functions most likely to be naturally in scope of the CDC are those that will benefit from new or enhanced national coordination models, contribute to or benefit from national data systems, inform national public health advice and policy, and strengthen pandemic preparedness and response. **Table 1** outlines potential functions of the CDC for discussion and consideration.

Case Study 1: Canada

The **Public Health Agency of Canada** (PHAC) was formed in 2004 following an outbreak of Severe Acute Respiratory Syndrome in 2003 and concerns about the capacity of Canada's public health sector to anticipate and respond effectively to public health threats.[6] One recommendation leading to the agency's formation was for clear federal leadership on issues concerning public health and improved collaboration within and between Canada's provinces and territories.

PHAC's mission is *to promote and protect the health of Canadians through leadership, partnership, innovation and action in public health* with a vision of healthy Canadians and communities in a healthier world.

Guided by the Chief Public Health Officer, PHAC's role is to:

- promote health
- prevent and control chronic diseases and injuries
- prevent and control infectious diseases
- prepare for and respond to public health emergencies
- serve as a central point for sharing Canada's expertise with the rest of the world
- apply international research and development to Canada's public health programs
- strengthen intergovernmental collaboration on public health
- facilitate national approaches to public health policy and planning.

In addition, PHAC administers grants and contributions to community, voluntary and not-for-profit agencies to support government policies and priorities. Its role administering funding accounts for approximately 33 per cent of its annual budget. PHAC maintains 15 offices across Canada's provinces and territories. [7]

Canada has a federated system of government very similar to Australia, with the roles and responsibilities of its federal, provincial and territorial governments broadly comparable to Australia's federal, state and territory governments. Insights into how PHAC operates across these different levels of governing and regional responsibility can be used to inform the design of our CDC.

Not all public health functions will be appropriate to include in the CDC. For instances where existing activities are clearly defined, well-coordinated, and effective, adding further coordination or reporting requirements may risk running counter to the CDC's purpose. The

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[6] Public Health Agency of Canada (PHAC), *About the agency: History*, Government of Canada website, 2008, accessed on 7 October 2022.

[7] PHAC, *Public Health Agency of Canada's organizational structure*, Government of Canada website, 2021, accessed on 7 October 2022.

CDC should recognise where functions, activities and stakeholder networks are well-established and instead seek to build strong partnerships across government and non-government sectors to support and leverage existing capabilities. Some examples include:

- **Primary Care and Hospitals** – although a CDC would ideally have a key role in developing trusted communication material to medical practitioners and frameworks for managing communicable and non-communicable diseases, primary care and hospital engagement and policy should remain separately managed within the Department of Health and Aged Care. However, important for consideration on how the CDC will operate will be linkages to primary care, something that was lacking during the COVID-19 pandemic – specifically pertaining to guidance.
- **Recovery** – although prevention, preparedness and response are within the scope of an Australian CDC, there are other designated Commonwealth agencies as well as other areas within the department that could be leveraged to fill this role.
- **Health regulatory agencies** – the CDC should seek to form connections with regulatory agencies where appropriate.
- **Research** – although there will undoubtedly be a role for the CDC in assisting to set public health research priorities, it will not conduct research. Rather, the CDC should form partnerships and collaborate with existing research centres, including Centres of Excellence, leveraging their expertise both for ongoing and emergency guidance. Additionally, there are many existing mechanisms to provide funding for research – and while a case could be made for the CDC to provide funding during emergencies, it is not currently viewed as in scope for business-as-usual activities.
- **Public health responses** that are the responsibility of states and territories.

Structure

It is yet to be determined whether a new statutory body is required for the CDC, and if so, what legal structure will be established. This will be informed by an assessment of the scope and functions, and be designed to provide clarity of purpose, efficiency and accountability to the Australian Parliament and the public. The process for determining the legal structure of the CDC will be informed by a governance assessment process undertaken with the Department of Finance, with the final structure being a decision of Government. As such, the legal structure of the CDC is outside the scope of these consultations.

Nevertheless, another important consideration – adjacent to the legal structure – concerns the nature of the relationship between the Australian Government and the CDC. If the CDC is to effectively deliver comprehensive and evidence-based guidance on public health issues while also being responsive to governments, it will need to have the right level of independence. It is an Australian Government entity's enabling legislation that provides its level of independence, and not the type of entity itself. This legislation is informed by the level of risk inherent in the entity undertaking its given activities.

Guiding Questions

1. **What decision-making responsibilities, if any, should the CDC have?**

    - Should the CDC directly take on any existing responsibilities, or provide a coordinating and/or advisory function only? And if so, would that be sufficient for responding to health emergencies?

2. **What functions should be in and out of scope of the CDC?**

    - What should the role of the CDC be in promoting or coordinating a One Health framework?

3. **What governance arrangements should be implemented to ensure public confidence in the CDC?**

    - How can the CDC balance the need for the CDC to be responsive and accountable to governments, while also providing trusted, authoritative, and evidence-based advice?

    - What aspects of independence do you believe are important to the successful function of the Australian CDC?

    - How should the CDC be organisationally structured to best meet the needs of Australia's federated society?

Table 1. Draft CDC functions in scope

	Protect	Gather & Analyse	Guide & Communicate	Lead	Cooperate	Prioritise	Develop

In Scope	• **National Medical Stockpile**
	• Biosecurity Act
	• Policy:
	  Border Health
	  Radiation and biotoxin
	  Health Emergency Planning
	• Response:
	  National Incident Centre
	  AUSMAT
	  Risk Assessments
	• **Planning:**
	  Scenario planning and exercises
	  Reviews and Lessons learned
		• **Communicable disease data & surveillance**
		• Disease registries (e.g. Creutzfeldt-Jakob Disease and Dust Disease Register)
		• Australian Immunisation Register (AIR)
		• **International Surveillance and WHO reporting requirements**
		• **Genomics data**
		• **Expert Advisory Groups, including zoonotic disease experts**
		• **Data standardisation**
		• Global, regional and local real time horizon scanning
			• Policy, Reporting & Guidance:
			  Communicable Disease
			  Health Threats
			  Immunisation
			  Laboratory
			  Public Health
			  Infection Prevention and Control
			  Genomics
			• **Case Definitions and Guidelines**
			• Health Promotion
			• Relevant Periodic National Health Surveys
				• Coordination of national public health activities
				• One Health
				• Key Strategies:
				  Antimicrobial Resistance (AMR)
				  Climate Change & Health
				  Blood Borne Viruses and Sexually Transmitted Infections
					• **National Focal Point**
					• World Health Organization
					• International Collaboration
					• Australian Medical Assistance Teams (AUSMAT)
						• Research Priorities:
						  - *AMR*
						  - *Preventive Health*
						  - *Environmental Health*
						  - *Communicable Disease*
						  - *Health Security*
						• Engagement with research partners
							• National Critical Care and Trauma Response Centre (NCCTRC)
							• Master of Applied Epidemiology at the National Centre for Epidemiology and Population Health (NCEPH)
							• Public health workforce training and reform
							• Emergency response capability and integration with health system inc. primary care

Possibly in Scope	• National Partnership on Essential Vaccines
	• Regulation and Compliance –biosecurity, IHRs, chemicals
	• Emergency response in long-term care facilities
	• Strategy Implementation
	• Security Sensitive Biological Agents
		• Antimicrobial Use and Resistance in Australia Surveillance System (AURA)
		• AIR Policy
		• Cancer registries (AIHW)
		• Health data on priority groups including First Nations people, people with a disability and older Australians
			• Advice on chronic diseases
			• Policy:
			  - *Preventive Health*
			  - *Healthy Behaviours*
			  - *Health Equity*
			  - *Food and Nutrition*
			  - *Women and men's health*
			  - *Children's health*
			  - *Injury prevention*
			  - *Population group issues*
			• Australian Immunisation Handbook
			• Quality and Safety guidelines
				• National issues:
				  - *Mental Health & Suicide Prevention*
				  - *First Nations Health*
				  - *Migrant/CALD Health*
				• Key Strategies:
				  - *Immunisation*
				  - *Preventive Health*
				• Tobacco and drugs Strategies – Governance and reporting
					• International engagement on preventive health issues	• Research Priorities:
						  - *Mental Health*
						  - *Cancer prevention*
						  - *First Nations*	

Not a core function	• Public health and medical research (including funding except in emergencies) • Prevention services promotion • Recovery	• Other workforce issues • Allied Health • Workforce reform • Hospitals	• Food Governance • Family and domestic violence • Grants and Funding (except for rapid research)	• Blood supply and policy • Gene technology • Pregnancy • General Practice		• Program Delivery • Screening • Regulation, including advice on regulation	

Bold text denotes functions which have been confirmed for roll out in the 2023-24 financial year

Why do we need a CDC?

For more than 35 years,[8] the notion of an Australian CDC has been touted as necessary for responding to public health threats and protecting the Australian community. In recent years, various public health threats have highlighted the gaps in our public health sector that need to be filled. These have included:

- epidemics and pandemics – SARS, H1N1 and now COVID-19, and outbreaks such as measles in Samoa,
- increasing external threats to health such as climate change and air pollution,
- mental health issues,
- antimicrobial resistance,
- increasing chronic disease burden, and
- national disasters.

The question this consultation paper asks is not just what these gaps are, but how the CDC can best fill them. Some examples of the benefits of a CDC are provided below.

A Coordinated and National Approach to Public Health

As it became clear in the response to COVID-19, there is currently no single and coordinated mechanism responsible for all aspects of national public health information, preparedness, response or guidance in Australia. This led to a lack of clarity on responsibilities, conflicting responses, information gaps, significant delays in the publication of advice and mixed messages to the public.

There are several mechanisms through which national public health leadership and coordination have traditionally occurred in Australia. Multiple frameworks apply across international, national and jurisdictional levels. Many national health sector coordination mechanisms have been or are currently facilitated by the Department of Health and Aged Care.

Foremost among the committee model for health sector decision-making during the COVID-19 pandemic has been the Australian Health Protection Principal Committee (AHPPC) and its various sub-committees, including those that comprise of experts, such as the Australian Technical Advisory Group on Immunisation and those that comprise of state and territory officials. The AHPPC terms of reference have traditionally been limited to matters of health protection, even though most Chief Health Officers have broader public health responsibilities within their jurisdictions. **Appendix C** provides a detailed summary of this committee and its membership – which demonstrates the multiple hats members are required to wear, in addition to what are already taxing full-time positions in their relevant areas of responsibility and expertise.

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[8] Douglas RM, Does Australia need a centre for disease control?, *The Medical Journal of Australia.* 1987; 147 (10): 493–6, doi.org/10.5694/j.1326-5377.1987.tb133642.x

Responsibilities of the AHPPC and National Cabinet during the pandemic necessitated decision-making on broader aspects of public health spanning various agencies at all levels of government, requiring ad-hoc engagement with and input from an extensive number of stakeholders not captured within the committee's terms of reference. In addition, without an avenue to exchange views and opinions, those outside this structure who held an alternative view or did not hold all the data available, often made their opposing views public – which sometimes had a detrimental effect on public confidence in the response.

Current and previous structures have been effective in coordinating issue-focused business. Across the Australian Government, this includes the Minister for Health's responsibilities under the Australian Government Crisis Management Framework. These responsibilities include determining requirements and issuing declarations during a human biosecurity emergency, shaping the direction of response to a health incident of national significance, implementing health measures, and developing assistance packages to assist with recovery efforts, as required. Across the health sector, this includes the coordination mechanisms defined in the National Health Security Agreement and *National Health Security Act 2007*, particularly the role of the AHPPC.

Opportunities exist beyond the committee model for an Australian public health agency to consolidate, clarify, and strengthen data and information sharing capability – including:

- surveillance of emerging risks and issues
- data analysis
- central (national) policy advice
- building transparency
- cultivating expertise and technical capability
- engaging with other domains of public health
- adopting a holistic approach across sectors including One Health and social services, and
- engaging with external stakeholders including key non-government and international stakeholders in the health sector.

The CDC could provide

- **fit-for-purpose national leadership on health issues of national importance, and health emergency coordination for a more consistent approach and greater interoperability across all areas relevant to health response.**

- **national leadership and coordination on areas of public health that have been previously neglected or disjointed, such as the wider determinants of health, including generational trauma, and the human health impacts of climate change, and**

- **new and permanent expert advisory groups to provide evidence-based advice across a wide range of public health topics of national interest.**

A Data Revolution: A National System and Improved Linkages

Data and digital information are key to a high quality and sustainable public health system. Australia's National Digital Health Strategy identifies accessibility, security of data exchange, high-quality data with a commonly understood meaning and better availability as some of the main themes to improve digital health capability. Accessible and integrated data with effective sharing between the Australian Government, states and territories and service providers is essential to ensuring the healthcare system can deliver safe, sustainable and effective services and plan for future responses. Digital health and data can also support national health systems to respond to national health challenges and emergencies in real time as seen during the COVID-19 pandemic.

Experiences over the course of the COVID-19 pandemic have demonstrated that our ability to inform policy to protect people in Australia from the health threats posed by communicable and non-communicable diseases is tied to the effectiveness of our disease surveillance and emergency response systems. Data driven public communication has provided a useful strategy to stop the spread of disease and encourage positive behaviours. However, it has, at times, also proven difficult to access and been disjointed and inconsistent – across jurisdictions and within and between Australian Government agencies.

For example, the National Notifiable Disease Surveillance System (NNDSS) is owned by the Department of Health and Aged Care, which coordinates national surveillance data for more than 70 diseases on the National Notifiable Disease List. These notifiable diseases are those that present a risk to public health if there is an outbreak. Every day, the state and territory health authorities supply the NNDSS with de-identified notification data about new cases of notifiable diseases.

However, the NNDSS is not interoperable with the jurisdictions and no identifiable data is stored in the NNDSS. Interoperable data is data that can be collected and shared in standard

ways to better manage disease surveillance and emergency response systems. Additionally, identifiable data is fundamentally important to key aspects of public health response and preparedness, such as contact tracing. These limitations of the NNDSS hinder the ability of the Australian Government, and states and territories to integrate, link and analyse the data to guide and evaluate policies and programs.

But this issue is much deeper and broader than a single information system. Creating a system where definitions are standardised, the flow of data is safe and seamless and as close as possible to real time, data is identifiable and therefore linkable to other rich data sources is key to unlocking Australia's potential to be a world leader in public health expertise and response and ultimately, to save lives. Along with the technical expertise to analyse and interpret data, allowing for rapid risk assessments and to inform policy and program decision making, making changes to the NNDSS is important, but it is merely the beginning of where we need to go.

Australian health data systems can be further enhanced through establishing a CDC data plan which could reflect:

- Right governance arrangements including legislative and policy safeguards to make data access safe and secure.
- Analysis and building of capabilities, including establishing methods and frameworks for analysis to inform decisions and operations.
- Building and accessing rich integrated data assets including establishing definitions and consistency for data collections across jurisdictions.
- Underpinning systems and infrastructure to allow timely data and insights productions.

The new CDC-established national surveillance and outbreak system would need to be supported by Commonwealth, state and territory legislation and standardisation of data, together with the *Data Availability and Transparency Act 2022* and the Australian National Data Integration Infrastructure (ANDII). This would provide a clear articulation of how jurisdictions should collaborate, legislate the secure collection and management of disease surveillance (including laboratory) data, and facilitate national policy consensus by creating a single shared national disease data set.

A truly national surveillance and outbreak system could enhance our ability to rapidly pivot to new requirements when responding to future threats, deliver cost savings by reducing manual data linkage efforts, and reduce duplicated efforts across the Commonwealth and jurisdictions for surveillance and identification of communicable disease It could also provide surveillance and identification of emerging threats and risks in relation to non-communicable disease, an opportunity to integrate genomics data and metadata, and provide a foundation for the incorporation of other associated data (such as animal health) which builds towards an integrated One Health approach.

The CDC could provide:

- **access to nationally identifiable data for linkage with existing data sets (for example, immunisation, aged care, hospitals, primary care, My Health Record, MBS and PBS, ABS census and mortality data, economic and employment)**

  This would result in a greater understanding of Australia's health and wellbeing and improve medium and long-term health outcomes and enable a more accurate understanding of the burden of communicable diseases among populations that may be at greater risk.

  All data collection should include collaboration with affected populations, with a specific focus on Closing the Gap reform priority four – shared access to data and information at a regional level.

- **a single national surveillance and outbreak management system, with national identifiable data and local connections to every jurisdiction, allowing for greater national consensus, enhanced detection and investigation of multi-jurisdictional disease outbreaks, and consistency in reporting, and**

  This would include appropriate governance and security of collected data and allow for clearer identification of outbreaks and trends for all infectious diseases in long-term care and other at-risk settings and potential linkage with other health data such as use of treatments or access to primary care.

- **an opportunity to provide a sustained funding model to enhance the capability of public health laboratories and public health units to fully integrate microbial genomics data and metadata into surveillance systems for analysis at jurisdictional and national levels.**

Guiding Questions

6. **What are the barriers to achieving timely, consistent and accurate national data?**

7. **What existing data sources are important for informing the work of the CDC, and how could existing data bodies (national, state and territory) be utilised and/or influenced by the CDC?**

   - Is there data currently not collected in Australia which should be considered?

   - What else is needed to ensure that Australia is able to identify emerging risks to public health in a timely way?

   - Would the development of a national data plan with an agreed scope and/or an evidence- based health monitoring framework be useful?

8. **What governance needs to be in place to ensure the appropriate collection, management and security of data?**

9. **How do we ensure the CDC has the technical capability to analyse this data and develop timely guidance?**

10. **How can the CDC ensure collaboration with affected populations to ensure access to, and the capability to use, locally relevant data and information, particularly as it relates to First Nations people?**

Case Study 2: United States

As the United States national health protection agency, the **US CDC's** mission is to *save lives and protect people from health threats*. It conducts critical scientific studies and provides health information that helps to fight disease and supports communities and citizens to do the same wherever such threats arise. Its remit includes both domestic and international work in communicable and non-communicable disease, environmental health and injury prevention. It has extensive laboratory infrastructure and technical expertise.

Its current roles include:

- detecting and responding to new and emerging health threats
- tackling the leading causes of death and disability among Americans
- promoting healthy and safe behaviours, communities, and environment
- developing leadership and providing training for the public health workforce, and
- putting into action science and technology resources to prevent disease.

Organised into centres, institutes, and offices, each component implements the agency's activities in a particular area of expertise while also providing intra-agency support and resource-sharing.

As one of the most substantially funded public health agencies, the US CDC offers snapshots into numerous other possible roles and scopes. In particular, the US CDC's role in global health programs and partnerships with the World Health Organization may serve as a guide for how the Australian CDC can work to support stronger disease preparedness through and with the Department of Foreign Affairs and Trade's Indo Pacific Centre for Health Security.

COVID-19 exposed areas for improvement in the US CDC. To move away from an academic approach, the CDC has recognised a need to prioritise action such as deploying for public health responses, embedding in the field during outbreaks and implementing activities that lead to public health impact. An example is increasing access to screening services and vaccinations.

Other issues which the US CDC has identified for improvement are changing priorities, lack of continuity and a mismatch of skills needed and staff. Steps being taken include having permanent leadership and response experts to assure continuity in policies, procedures, and staffing. Additionally, the CDC will benefit from a core of permanent staff supplemented with a small group of emergency response trained, highly qualified staff who can be called upon when required.

National, Consistent and Comprehensive Guidelines and Communications

Throughout the first two years of the COVID-19 pandemic, jurisdictions employed a variety of public health and social measures, becoming increasingly divergent over time. At times, this caused significant confusion and angst among the public, health professionals and industry.

In 2020 and 2021, national providers across the healthcare industry and other industries – including the critical infrastructure sectors of energy, banking and finance, food and grocery, and transport – repeatedly called for consistent and timely advice from government.

As noted previously, during the pandemic, those individuals relied upon to provide health advice were often pulled in various directions as they fulfilled other roles responding to the pandemic. Many technical experts were regularly stretched across multiple roles, and often these individuals were required to wear different hats requiring nuanced direction. The advice to a state, for example, will not necessarily be the same or could conflict with that required at the national level – and experts have often been sitting on bodies providing advice to both levels of government.

At a national level, there was a heavy reliance on specific individuals, particularly those with a high level of pragmatism and insight. While this approach worked most of the time, the support available to these individuals was clearly insufficient. A more dedicated and sustainable model for obtaining expert guidance both routinely, and during crises, is needed.

But this was not the only hurdle. The lack of joined-up data and a national point of analysis meant that the best available evidence was simply that – the best available – but by no means the best that was possible. While Australia exists in a federated system, and it is the role of the states and territories to set their own public health priorities and respond to health threats to their populations, having nationally consistent analysis and advice could provide an even playing field from which to develop state-based health policy, and perhaps, further reduce the risk of divergent responses where contextual elements are not a factor.

A CDC as a central hub for public messaging on key public health issues could also be helpful for the promotion of issues of national significance, including mental health and suicide prevention.

The CDC could provide:

- **a national 'one-stop shop' for trusted public health information and advice to governments as a basis for policy and decision making, which could be published externally for the public**

  This would employ a multidisciplinary approach, incorporating views from areas that underpin and influence public health response.

- **public messaging through a multichannel approach on public health issues of national importance, including real time engagement when needed**

- **promotion of population-level evidence-based prevention and control programs through dedicated resources for analysis and reporting and connections to experts**

- *This would support the Australian Government's commitment to the National Agreement on Closing the Gap, particularly priority reform four on access to data and implementation of its obligations under the Convention on the Rights of People with a Disability and build on the Australian Institute of Health and Welfare's Aboriginal and Torres Strait Islander Health Performance Framework.*

- **assessing policies and programs and generating evidence where it previously was not available, and**

- **ongoing national data collection and sharing of consumer insights to support health promotion and disease prevention.**

A National Medical Stockpile for the Future

For more than 20 years, the National Medical Stockpile (NMS) has maintained a reserve of medical supplies for use against potential chemical, biological, radiological and nuclear threats. This scope was expanded in 2002 and 2004 to also cover pandemic flu items. Personal protective equipment (PPE) was later added to the NMS's stockpile in response to the 2009 H1N1 (swine flu) pandemic, which was the first large scale deployment from the NMS. These supplies and procedures were expanded even further to support Australia's front-line workers and most at-risk communities during the COVID-19 pandemic.

A key strength of the NMS is that, compared to state and territory equivalents, it can leverage national purchasing power and networks when procuring from the global market. The NMS has proven to be an effective initial response mechanism to rapidly changing emergency circumstances though obtaining medicines, PPE, and more recently vaccines and other medical supplies. However, there are opportunities to leverage the NMS capability further, primarily through improving national coordination. Better avenues for information sharing across state and territories and other sectors would allow Australia to strategically prepare, respond and adapt to evolving health crises and ensure we have sufficient vital health supplies while minimising wastage.

New information-sharing arrangements which inform strategic reserve modelling through the CDC would be of substantial benefit to future pandemic preparedness. The CDC could also lead a national stockpile coordination function to ensure an efficient response to health emergencies through improved IT systems with robust, up to date data processing and clear reporting for effective decision making. Similarly, the CDC could provide a centralised point of information and resource sharing on stockpiled supplies for not only states and territories, but key sectors of Australian Government responsibility, such as aged care, primary care and disability care. These sectors have previously had to navigate an array of state and territory,

primary health networks, and federal contacts individually as was experienced during the COVID-19 pandemic.

The CDC could provide:

- new information-sharing arrangements to inform strategic reserve modelling
- leadership over national coordination of reserves and distribution to ensure an efficient response to health emergencies, and
- a centralised point of information and resource sharing for not only states and territories, but key sectors such as aged care which have previously had to navigate an array of state and territory, primary health networks, and federal contacts.

Guiding Questions

14. What has your experience, if any, been of accessing supplies from the National Medical Stockpile (either before or during COVID-19), and can you identify any areas on which the CDC could expand or improve?

A World-class Workforce

As highlighted by the COVID-19 pandemic, Australia would greatly benefit from a domestic workforce capability that is sustainable, scalable, rapidly activated, and capable of responding in an all hazards context. The CDC could be utilised to provide national leadership and enhance existing training, develop and maintain workforce skills needed for emergency response, and better plan for future surge capacity

In response to COVID-19, the Australian Health Practitioner Regulation Agency alongside the relevant National Boards was quick to establish temporary pandemic registers. These registers helped to fast track the return of nearly 29,000 experienced and qualified health practitioners to the workforce.[9] Nevertheless, despite this and other efforts (such as deploying Australian Defence Force personnel) to surge experienced workers from within and outside public health, our pandemic response was still not fully sufficient. For example, several inquiries into the handling of COVID-19 outbreaks in aged care settings have found that resources were often reactive – and came too late for many who were otherwise unprepared to deal with the pandemic.[10] At a national level, surge capacity for contact tracers was drawn from departmental staff who required training and lacked the experience to handle complex tracing tasks.

Undertaking regular crisis exercises or developing detailed plans alone will not provide this broader workforce capability. Increased support for established tertiary courses such as a Master of Applied Epidemiology would be advantageous, as well as clear pathways from

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[9] Australian Health Practitioner Regulation Agency, *Thousands more health practitioners granted temporary registration able to join the pandemic response*. AHPRA website, 2021, accessed 24 October 2022.

[10] L Gilbert and A Lily, Independent Review COVID -19 outbreaks in Australian Residential Aged Care Facilities – no time for complacency, *Department of Health and Aged Care,* 2021.

training into job opportunities and career progression. However, COVID-19 also demonstrated the need for the rapid development of a whole suite of short-term training and resources – particularly in the Infection, Prevention and Control space. These were vital to providing technical skills across a broad array of different audiences (for example, nurses, paramedics, contract tracers, teachers, carers, aged care workers, and disability support workers) and tiers of technical proficiency. In addition, consideration could be given to developing more co-delivered education and placement pathways that reduce shortfalls in identified critical roles. During the COVID-19 pandemic, a key element of the response for First Nations and culturally and linguistically diverse communities was ensuring that the response workforce had an understanding of cultural sensitivities and communications employed were culturally appropriate. Doing so had significant impacts on the effectiveness of programs such as the rapid increase in vaccination uptake in these communities once cultural safety was embedded in the rollout. It will be important for any workforce training to embed an understanding of cultural safety.

Before these more direct interventions, there is an opportunity for the CDC to undertake comprehensive mapping of the public health workforce to gain an understanding of skills gaps, prioritisation of scopes of practice, and regulations in each state and territory, particularly where that might limit the movement of workforce during emergencies. This would also enable modelling and exercising to understand what skills would be needed in different incident scenarios and where there may be gaps to fill through training and surge capacity.

First Nations and remote communities in particular experience additional challenges due to reduced health infrastructure and workforce, and the distances between health facilities. Rapid response in these communities is vital to minimise severe outcomes for people who may be at higher risk of poorer outcomes. For rapid response to be successful, the administering workforce must be trusted within communities and have established culturally safe practices. Supporting the First Nations community health sector to build these crisis management skills within their workforce strengthens the commitments made to First Nations people under priority reform two of the National Agreement on Closing the Gap.

The CDC could provide:

- **mapping of the public health workforce in order to better understand gaps, regulatory barriers and aid in future planning**
- increased workforce capability across all disciplines to support national leadership and coordination
- **a permanent register, and training, for a reserve of public health workers who can be surged in times of crisis.**

  This could cover fields such as epidemiology, bio-informatics, infection prevention and control, laboratory science, public communications, contact tracing, and beyond per all hazards, and involve surge-specific re-accreditation.
- **National public health training (see Case Study 3: Europe) that does not supplant existing state and territory training, but further develops the capability of the public health workforce and ensures nationally consistent approaches including emergency responses**

  This would be developed alongside professional associations and education policy makers to ensure Australia's workforce has the right mix of skills, and leverage existing training, including that provided by the National Critical Care and Trauma Response Centre.
- **national health emergency exercise programs to test Australia's capacity to regularly respond to health emergencies and contribute to international incidents.**

Guiding Questions

15. **How could a CDC work to ensure that our public health workforce is prepared for future emergencies, both in Australia and abroad?**

16. **How could the CDC support and retain the public health workforce in reducing the burden of non-communicable disease?**

Rapid Response to Health Threats

Australia, certainly by most international standards, has excellent communicable disease surveillance, even with its shortcomings. However, health surveillance is ultimately a reactive process, with no real hindsight for dealing with signals and alerts. It may fail to detect more radical changes with a major medium-term or long-term impact on public health. Existing connections meant we were forewarned of the risks from COVID-19 and able to make decisions to delay its entry and, in effect, buy us more time to prepare our health system. However, this will not always be the case. Being forewarned through country-based surveillance is a luxury we may not have in the next pandemic. Rapid responses are often contingent on the availability of quality information. As an island nation in which health threats, such as COVID-19, originate largely from importation, timely insights from our international partners are an invaluable contributor.

The various reviews into the global response to COVID-19 have highlighted the need for One Health collaboration as well as increased surveillance to identify emerging pathogens. These gaps are common across health systems and are a clear area for improvement globally. The CDC could take a role in coordinating Australia's One Health collaboration through development and strengthening of One Health capacities in disease detection, verification, containment and response.

The CDC may be well placed to undertake integrated animal, human and environmental health surveillance, both feeding into existing systems and new surveillance technologies such as what may be implemented through an international treaty on pandemic prevention, preparedness and response. Such surveillance will need to have a sound domestic system which is compatible with existing and future global systems.

The CDC could have a particular role in linking in with other international agencies and CDC equivalents to build networks on information sharing, such as data from the Department of Home Affairs on the health of incoming migrants. This can form part of global surveillance mechanisms and should also include other forms of intelligence sharing (for example, focal point relationships between countries) to ensure the CDC can quickly respond to emerging risks.

The CDC could establish new information and intelligence sharing networks with a particular focus on connecting with countries where Australia does not have strong existing networks. This can ensure that Australia has timely information available to provide advanced warning of health risks emerging outside our own borders.

Emergency Operations Centre

The National Incident Centre (NIC), established in the Department of Health and Aged Care, is Australia's current national public health emergency operations centre (PHEOC). Its role is described in the National Health Security Agreement, and associated plans and procedures.

A CDC could strengthen Australia's approach to health emergency management by building on the current coordination role of the NIC to support a PHEOC implementing a comprehensive program of preparedness, planning and capacity building aligned with the World Health Organization's Framework for PHEOCs.[11] This could include activities that:

- work across sectors to strengthen prevention and mitigation of hazards
- through the National Medical Stockpile, enhance readiness by planning for and stockpiling response resources
- establish institutional and technical capacities and capabilities, including adopting interoperable emergency management principles such as those of the Australasian Inter-Service Incident Management System
- integrate with public health surveillance programs
- integrate with environmental health programs
- engage communities and stakeholders, and
- train staff and validate plans.

A 24-hour PHEOC facility supports rapid information sharing and consistency of approach across agencies at the federal and state and territory levels in response to emerging

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[11] World Health Organisation (WHO), Framework for a Public Health Emergency Operations Centre, WHO website, 2015, accessed 18 October 2022.

incidents, in addition to meeting urgent assessment, response and reporting requirements such as those prescribed by the International Health Regulations (2005).

A PHEOC compliant with the WHO Framework would have infrastructure and logistics to meet a wide remit of operational demands, including hardware and software for incident management and emergency communications.

PHEOCs support an "all- hazards" approach to health emergency management through interoperable emergency management principles. Flexible yet consistent approaches to governance and capability enable subject matter experts from policy and program areas, and across agencies and jurisdictions, to integrate into consistent command structures, planning and response procedures, and infrastructure. By providing training to potential responders across a wide range of disciplines and maintaining core planning and logistics capabilities, effective responses to complex incidents can be rapidly established and supported.

The CDC could provide:

- **continuous horizon scanning through the integration of animal, human, environmental and global health surveillance**
- **development of Rapid Risk Assessments (RRA) of new and emerging health hazards utilising intelligence garnered through the CDC's networks and information systems and conducted by on-hand experts**
- **sharing of RRAs between all jurisdictions and with Primary Health Networks/the primary care sector where appropriate, ensuring best-practice and agreed rapid response across the country, and**
- **a fit-for-purpose PHEOC to support national coordination of health emergencies.**

Guiding Questions

17. **What role could the CDC play in greater national and international collaboration on One Health issues, including threat detection?**

18. **What are the gaps in Australia's preparedness and response capabilities?**

    - Could the role of the National Incident Centre be modified or enhanced?

    - What functions should a national public health emergency operations centre deliver to strengthen Australia's coordination of health emergencies?

19. **How can the CDC position Australia, mindful of global, regional and local expertise, to be better prepared for future pandemics, health emergencies, and other public health threats?**

    - What could our contribution to global preparedness look like?

Case Study 3: Europe

The **European Centre for Disease Prevention and Control** (ECDC) was established in 2005 as a European Union (EU) agency. Aimed at strengthening Europe's defences against infectious diseases, the ECDC's mission is to identify, assess and communicate current and emerging threats to human health posed by infectious diseases.

To strengthen and develop continent-wide disease surveillance and early warning systems, the ECDC works in partnership with national health protection bodies across Europe to pool Europe's health knowledge and develop authoritative scientific opinions about the risks posed by current and emerging infectious diseases.

The ECDC:

- collects, collates, evaluates, and disseminates relevant scientific and technical data

- provides scientific opinions and scientific and technical assistance, including training

- provides timely information to the European Commission, the Member States, Community agencies and international organisations active within the field of public health

- coordinates the European networking of bodies operating in the fields within the centre's mission, and

- exchanges information, expertise, and best practices, and facilitates the development and implementation of joint actions.

The ECDC delivers public health training to *"support and coordinate training programmes … to have sufficient numbers of trained specialists, in particular in epidemiological surveillance and field investigations, and to have a capability to define health measures to control disease outbreaks."* The ECDC's training function is a core component of its mandate, with training informed by subject matter experts from disease programs and public health functions and counting for continuing professional development for medical professionals.

The ECDC carries out online and live courses for public health professionals; provides training and materials for public health trainers; develops core competency frameworks to define, categorise and standardise public health expertise; and offers fellowships which are two-year competency training programs in field epidemiology or public health microbiology.

The ECDC's experiences in collating and sharing scientific and technical data is particularly relevant in the Australian context. This is due to the important role of non-government research organisations in bolstering Australia's national data analysis and laboratory capabilities. Lessons from the ECDC, such as how to maintain effective information exchanges, will assist the CDC to function effectively as a central source of communicable and non-communicable disease linked data. Through this, researchers, state and territory partners, and other key stakeholders will be empowered to design and put into action best-evidence responses to health threats.

International Partnerships

International engagement, coordination and intelligence sharing are central to the role of all international CDCs. International engagement would support the Australian CDC to remain at the forefront of international developments and build the necessary connections for timely advice, data sharing and capacity improvements in the face of current and future communicable disease threats.

The CDC could potentially undertake functions that are established or promoted in the new international instrument (treaty) on pandemic prevention, preparedness and response being drafted and negotiated under the constitution of the WHO. This new instrument will build One Health collaboration and work to increase disease surveillance for emerging pathogens. An Australian CDC could have a role in feeding into global surveillance systems as well as coordinating global health response actions that may be triggered by a pandemic treaty.

Participating in stronger international engagement facilitates both earlier and greater access to information on emerging disease risks, particularly in regions where future zoonotic diseases or variants are more likely to arise, along with an earlier indication of other nations' approach to public health and safety measures such as border closures. This occurred during the COVID-19 pandemic when early engagement with countries such as Israel and South Africa gave us early insight into vaccination programs and the Omicron variant respectively.

The CDC could also focus on technical engagement and undertake a role in providing technical advice to the Australian, state and territory governments and within the region. For example, the CDC could provide advice on the establishment of an international instrument on pandemic prevention, preparedness and response as well as amendments to the International Health Regulations (2005) in aspects of these instruments that fall within their purview.

Australia regularly fields requests for assistance from our regional neighbours. In the three months leading up to the pandemic, we provided assistance through our Australian Medical Assistance Team to Samoa in response to the measles outbreak and to assist first responders and provide respite coverage for Whakatāne Hospital following the White Island Volcanic Eruption in New Zealand. Such requests can range from support for public health, the deployment of emergency medical teams, provisions of personal protective equipment and vaccines. The CDC should continue to play a role in supporting our neighbours and could contribute further to building capability in the region.

The CDC could provide:

- **a clearer focal point for international information sharing and risk mitigation, including the incorporation of the Australian National Focal Point under the International Health Regulations (2005)**

- **proactive engagement with other CDCs across the world, including the US, Canada, UK, EU and Africa, as well as similar bodies throughout the Indo-Pacific region to provide earlier warning to Australia of infectious diseases of concern, share information and proposed responses, and better equip Australia to act early to prevent spread or secure access to countermeasures, and**

- **stronger Australian leadership credentials in infectious diseases and other health emergency responses, aligning with the DFAT-led Indo-Pacific Centre for Health Security.**

Guiding Questions

20. What role should the CDC undertake in international engagement and support internationally, regionally or domestically?

- International engagement, coordination and intelligence sharing are central to the role of all international CDCs. What additional objectives should the CDC include? (for example, leadership, technical engagement and capacity building)?
- How can the CDC be utilised to strengthen pandemic preparedness internationally?

Leadership on Preventive Health

While we may conceptualise non-communicable diseases and communicable diseases as distinct from one another, in reality they have significant interactions. Indeed, the long-term strain placed upon the bodies of people suffering with chronic diseases means they are at greater risk of poor outcomes from viruses (such as COVID-19) and other health threats such as injury and trauma.

On average, Australians live almost 11 years in poor health, or around 13% of their lives. It is estimated that 38% of disease burden (or 49% for First Nations people) could be prevented through a reduction in risk factors such as physical inactivity, dietary risks, alcohol, tobacco and other drug use, as well as conditions such as obesity[12] – noting of course the impact that the wider determinants of health have on all of these factors. Mental health also plays an integral role in determining our overall health and social and emotional wellbeing.[13]

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[12] Australian Institute of Health and Welfare (AIHW), *Australian Burden of Disease Study 2018 – Key findings*, Cat. no. BOD 30. AIHW, Australian Government, 2018, accessed 20 October 2022.

[13] AIHW, 2020. Australia's health 2020 data insights. Australia's health series no. 17. Cat. no. AUS 231. Canberra: AIHW.

Preventive health action is a key to addressing this. The National Preventive Health Strategy 2021-2030 identified that Australia's current prevention efforts need to be systematised, enhanced and strengthened to create long-term, sustainable improvements.[14] Australians in good health are better able to lead fulfilling and productive lives, participating fully in their community, in their education and/or in their employment. Action on preventive health is also cost effective, with a 2017 Productivity Commission report conservatively estimating that a $4 billion per year increase to GDP could be achieved if the health of people in fair or poor health was improved.[15] The Australian Institute of Health and Welfare (AIHW) has established a large-scale program on burden of disease and chronic disease which the CDC could promote and analyse.

To support an effective and efficient national response to prevention, strong leadership and governance must be prioritised. An expert-led governance mechanism within the CDC could provide the platform for a whole-of-systems approach to prevention that is evidence-based, promotes health equity, and provides advice on current, emerging, and future priorities in prevention. This is one of the key recommendations outlined in the National Preventive Health Strategy 2021-2030 and has strong, widespread support from the public health sector.

The Australian National Preventive Health Agency (Promoting a Healthy Australia) was established in 2010 to provide national capacity to drive preventive health policies and programs, and strengthen Australia's investment and infrastructure in preventive health. The need for a national agency to drive the preventive health agenda was identified by the Council of Australian Governments in 2008 and was further developed in the Government's response to the National Preventative Health Taskforce's report, and the report of the National Health and Hospitals Reform Commission. While this agency ceased operations in 2014, it could be that such a function could exist as an arm or centre within the CDC.

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[14] Department of Health and Aged Care (DoHAC), *National Preventive Health Strategy 2021-2030,* DoHAC website, 2021, accessed 14 October 2022.

[15] Productivity Commission (PC), Shifting the Dial: 5 year Productivity Review, *Supporting Paper No. 6*, PC website, 2017, accessed 18 October 2022.

> **The CDC could provide:**
>
> - **national, consolidated promotion of whole of government responses to prevent disease burden**
> - **a single source of expert health guidance that aims to reduce chronic conditions at the population level**
> - **monitoring and ongoing surveillance of preventive health outcomes, including burden of disease – in collaboration with the AIHW**
> - **improved public awareness of preventable chronic conditions including the modifiable risk factors**
> - **evidence-based assessment of the effectiveness and efficiency of preventive health measures and guidance on investment and where to prioritise implementation**
> - **a platform to engage with experts and policy makers across all levels of governments and all sectors to provide a coordinated national approach to preventive health efforts**

Guiding Questions

21. **How can the CDC foster a holistic approach across public health, including the domains of health protection and promotion and disease prevention and control?**

22. **What role could the CDC have in implementing the goals of the National Preventive Health Strategy?**

23. **Should the CDC have a role in assessing the efficacy of preventive health measures?**

Wider Determinants of Health

The health and wellbeing of Australians is affected by considerably more factors than exist within the direct remit of the health portfolio. Wider determinants of health, defined by the World Health Organization as the "non-medical factors that influence health outcomes", are significant drivers behind susceptibility to disease and health-seeking behaviours and can account for up to 55% of health outcomes.[16] Public health policy cannot be genuinely effective without regard to the wider determinants of health.

Examples of wider determinants of health include:

- generational trauma
- employment and income

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[16] WHO, *Social determinants of health*, WHO website, n.d., accessed 17 October 2022.

- unemployment and job security
- working conditions
- access to social security and services
- food security
- education and development
- access to stable housing and shelter
- the environment
- family relationships, including exposure to domestic abuse and violence, and
- access to health services

Inherent in consideration about the wider determinants of health is the matter of equity, and how improving public health outcomes can be improved by addressing social, economic and environmental inequities. Public health benefits realised in this manner not only improve health outcomes for individuals and society, but also reduce expenditure on health and social services necessary to address the consequences of inequities.

Establishing a CDC presents opportunities not just to consider national public health policy with respect to the impacts of wider determinants of health, but moreover to influence and drive positive change in wider determinants to improve public health outcomes. This will require a strong and coordinated cross-portfolio collaboration to support integrated solutions to address these complex challenges.

First Nations Health

For First Nations people, good health is more than the absence of disease or illness; it is a holistic concept that includes physical, social, emotional, cultural and spiritual wellbeing, for both the individual and the community.[17]

First Nations people experience a burden of disease at 2.3 times the rate of non-Indigenous Australians.[18] Wider determinants of health and social inequities are significant drivers of poorer health outcomes experienced by Aboriginal and Torres Strait Islander people.

The National Aboriginal and Torres Strait Islander Health Plan 2021 – 2031 recognises that the entire health sector must be accountable for ensuring health and wellbeing outcomes for First Nations people and communities, with a grounding in wider determinants of health.[19]

Cultural determinants of health are "the ways of knowing, being and doing that encompass a holistic Aboriginal and Torres Strait Islander understanding of health and wellbeing." Adopting a cultural determinant approach will require collaboration across governments to embed cultural determinants in policies, enable First Nations people to maintain, revitalise and practise culture through strengthening cultural authority, and enabling self-determination.

For First Nations people, wider determinants account for 34% of the total health gap between Indigenous and non-Indigenous health outcomes. The wider determinants accounting for

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[17] AIHW, *Indigenous health and wellbeing*, AIHW website, 2022, accessed 24 October 2022.

[18] AIHW, *Australian Burden of Disease Study: impact and causes of illness and death in Aboriginal and Torres Strait Islander people 2018*, AIHW website, 2022, accessed 24 October 2022.

[19] DoHAC, *National Aboriginal and Torres Strait Islander Health Plan 2021-2031*, DoHAC website, 2022, accessed 14 October 2022.

most of the gap are income, employment, hours worked, and risk factors such as smoking and obesity.

As identified in the National Agreement on Closing the Gap, in order to effect real change, governments must work collaboratively, and in genuine partnership with, First Nations people because they are the essential agents of change.[20] This is the basis for the agreement's priority reform number one – formal partnerships and shared decision making – which commits to establishing accountable and representative joint decision making arrangements between First Nations people and each state and territory government. These formal partnerships are intended to improve outcomes across priority areas including (but not limited to) justice, housing, First Nations languages, early childhood care and development, and social and emotional wellbeing.

Establishing a CDC presents opportunities to strengthen a holistic, public health approach to improving health outcomes for First Nations people, including through adopting the National Aboriginal and Torres Strait Islander Health Plan 2021-2031. It provides opportunities to support approaches that enable Aboriginal and Torres Strait Islander people to lead and determine priorities and actions in the development of public health policies, the provision of public health advice and the delivery of public health activities.

Disability

Disability is an umbrella term for any or all of the following components, which may be influenced by environmental and personal factors:[21]

- impairment (problems in body function or structure)
- activity limitation (difficulties in executing activities), and
- participation restriction (problems an individual may experience in involvement in life situations).

In 2018, an estimated 1 in 6 people in Australia lived with a disability.[22] The concept of disability is complex, with an extremely diverse range of presentations and impacts which cannot be easily generalised. While some people with disability will have poorer health outcomes or more complicated health needs, others will not. Disability is significantly affected by and impacts on public health policy, including through overall health and wellbeing, access to health care, access to essential infrastructure including water, sanitation and hygiene, and protection from health emergencies.[23]

Australia's Disability Strategy 2021-2031, agreed by all levels of government, is a national framework for continuing to improve the lives of people with disability through greater inclusion and accessibility. Health and wellbeing is one of seven outcome areas.[24]

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[20] Department of the Prime Minister and Cabinet (PM&C), *National Agreement on Closing the Gap*, Closing the Gap website, 2020, accessed 28 October 2022.

[21] AIHW, *Disability reports and data*, AIHW, Australian Government, 2022, accessed 12 October 2022.

[22] AIHW, *Health of people with disability*, AIHW, Australian Government, 2022, accessed 12 October 2022.

[23] WHO, *Disability and Health*, WHO website, 2021, accessed 13 October 2022.

[24] Department of Social Services (DSS), *Australia's Disability Strategy 2021-2031*, DSS website, 2022, accessed 24 October 2022.

Establishing a CDC provides opportunities for holistic disability, a whole of health guidance and the representation of people with disability into public health policy and programs.

> **The CDC could provide:**
>
> - **inclusion of the impact of wider determinants of health when developing public health guidance and policy, and**
> - **leadership on driving positive change in wider determinants of health to improve public health outcomes.**

Guiding Questions

24. **How could the CDC work in partnership with at-risk populations and associated health sectors, including First Nations people, people with disability and older Australians, to ensure their voices are included in policy development?**

    - How could the CDC meet the intent of Closing the Gap?

25. **How can the CDC best deliver timely, appropriate, and evidence-based health information to culturally diverse and/or at-risk populations?**

26. **How should the CDC engage across sectors outside its immediate remit (including portfolios with policy responsibility for wider determinants of health, culture, and disability)?**

Research Prioritisation

Research is critical to developing and implementing effective public health policy. It not only strengthens our understanding of public health issues, but also ensures that policies can be designed and underpinned by the best available evidence. Research contributes to improved health outcomes and more efficient health expenditure.

In Australia, research is conducted by assorted entities including universities, academia, research institutes, hospitals, the business community, and industry organisations. Funding is administered through several different means, but most commonly through grants disbursed by various organisations, including the Australian, state and territory governments, non-government organisations, and charities. Grants may be administered out of flexible long-term funding sources subject to ongoing prioritisation, such as the Medical Research Future Fund, or from issue-specific or time-limited funding programs.

Australia's research sector is sophisticated and complex, with well-established organisations and high-quality outcomes. Nevertheless, experiences during COVID-19 pandemic have highlighted opportunities to improve national coordination of research priorities and collaboration.[25]

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[25] The University of Sydney, *Review of Australian COVID-19 research finds lack of collaboration and crucial gaps,* The University of Sydney, 2021, accessed 24 October 2022

An Australian CDC could support improved national coordination of public health and medical research priorities in various ways, including:

- determining national public health priorities for funding sources administered by other entities
- facilitating collaboration between entities conducting public health and relevant medical research
- synthesising research outcomes into national guidelines
- developing procedures to fast-track critical research during health emergencies

Any role that an Australian CDC would undertake would need to be accompanied by clarity of purpose, scope and interaction with existing priority-setting entities including the National Health and Medical Research Council and the research sector.

The CDC could provide:

- **development and implementation of a nationally agreed framework for the commissioning and management of research to support responses to public health threats.**

Guiding Questions

27. **Should the CDC have a role in advising on (or directly administering) funding or prioritisation of public health and medical research?**

The CDC Project

The CDC project encompasses the design and consultation on the structure of an Australian CDC or public health agency.

Consultation

Consultation with stakeholders will be crucial to informing the development of the CDC model. Targeted consultation on the purpose, scope and functions of the CDC will assist the Department of Health and Aged Care in refining a proposed model for the CDC.

Consultation on the discussion paper will also be supported by targeted workshops with key stakeholders to further explore the themes detailed in this discussion paper.

Consultation on this paper will conclude on 9 December 2022. The department will then analyse the feedback provided and synthesise this information to provide advice to the Australian Government on the proposed scope, functions and responsibilities of an Australian CDC via a CDC establishment plan.

The establishment plan will also detail the approach to staged implementation of the functions and priorities identified through consultation, along with operational requirements, such as determining the legal entity, governance arrangements and legislative requirements.

The department has also received a number of submissions and proposals from key stakeholders on the development of the CDC. These will also be factored into the analysis of feedback received through the workshops and via this discussion paper submission process.

Ultimately, the final decisions about how the CDC will be established and in what format will be a matter for the Australian Government to decide.

Plans for Establishment

Following consultation with the sector, states and territories, and Australian Government agencies, the CDC establishment plan will be finalised and the project will move into the operationalisation phase. A staged rollout to establish the CDC will occur with phase one prioritising the below areas for implementation by early 2024, as determined by the Minister for Health and Aged Care:

- further developing he National Medical Stockpile
- developing a national enhanced communicable disease surveillance and emergency management system, and
- communicable disease surveillance, prevention and response

Consultation with states and territories will continue throughout this phase. Other areas, to be identified throughout this consultation process, may also get under way in the first phase of the project.

Phase two will include the rollout of additional priority areas.

These functions will be established in the organisation over time, learning from previous implementations and allowing for further consultation, particularly on issues which cut across a number of sectors.

As part of the establishment of the CDC, it will be integral to develop underpinning legislation both for the operation and functions of the organisation itself, but to also allow for the comprehensive and timely collection of data to inform national public health guidance and policy. It is anticipated that this process may take one to two years.

Guiding Questions

28. How could the success of a CDC be measured and evaluated?

Next Steps

Feedback from this discussion paper will allow the department to provide advice to the Government on the CDC's shape, scope, powers and scale.

Consultations with key internal and interdepartmental stakeholders have begun, and over the coming months there will be opportunities for targeted consultation around the Australian Government's proposal for the CDC.

The below groups will be consulted on the discussion paper:

- state and territory governments (engaged through the Health Chief Executives Forum, Chief Health Officers, Australian Health Protection Principal Committee and Health Ministers Meeting)
- Australian Government departments/agencies
- peak medical bodies and medical colleges
- research and academic institutions, and
- international CDCs and similar organisations.

Next steps will include:

- targeted consultations with key stakeholders on the discussion paper
- targeted workshops throughout November 2022 to further explore the proposals in this discussion paper
- a report produced for the department that will summarise the feedback provided through these forums to help refine the shape, scope, powers and scale of the CDC
- consultation with states and territories, and the interdepartmental committee on the CDC establishment plan, and
- advice provided to the Government on the proposed model and establishment plan.

Glossary

Term	Definition
"All hazards" approach	An "all hazards" approach to preparedness focuses on threats from natural, biological, chemical, radiological, and terrorism events to help the nation prepare for and respond to urgent threats to the public's health.
Clinicians	A clinician is a practitioner who spends most of their total weekly working hours engaged in clinical practice (that is, in diagnosis and/or treatment of patients including recommending preventive action).
Communicable disease	A disease or illness caused by infectious agents or their toxic products and can be passed from one person or animal to another. Also referred to as an infectious disease.
Determinant	Any factor that can increase the chances of ill health (risk factors) or good health (protective factors) in a population or individual. Services or other programs that aim to improve health are usually not included in this definition.
Disease	A disease is a physical or mental disturbance involving symptoms (such as pain or feeling unwell), dysfunction or tissue damage, especially if these symptoms and signs form a recognisable clinical pattern.
Health	A state of complete physical, mental, social, and emotional wellbeing and not merely the absence of disease or illness.
Health data	Health data is any data related to health conditions, reproductive outcomes, causes of death, and quality of life for an individual or population. Health data includes clinical metrics along with environmental, socioeconomic, and behavioural information pertinent to health and wellness.
Health emergency	A health emergency can involve incidents that require significant and coordinated effort to ensure that the health system can respond effectively, while easing any adverse health consequences for communities. Health emergencies include disease outbreaks, natural disasters and mass casualty incidents. Examples include: • communicable disease outbreaks • natural disasters like bushfires, cyclones, earthquakes, floods or tsunamis • chemical, biological, radiological or nuclear incidents of national significance • plane, train or other major transport accidents involving mass casualties, and • bombing or armed attacks.
Health promotion	A broad term to describe activities that enable communities and individuals to increase control over and improve their health. Health promotion focuses on addressing and preventing the root causes of ill health, rather than on treatment and cure.

Term	Definition
Health system	All activities with the primary purpose to promote, restore, and maintain health.
Incident Management Team	An Incident Management Team is a group of incident management personnel comprising of an incident controller and other personnel appointed to be responsible for the functions of operations, planning, and logistics.
Interoperability	Interoperability is the ability of a system or product to transfer information within and between systems or products without special effort on the part of the user. National interoperability is made possible by the implementation of a set of shared standards, capabilities, and environmental factors. Better interoperability improves services. It can enable people, particularly those with severe access issues, to interact with the healthcare system more readily.
National Focal Point	The International Health Regulations (IHR) establish the need for signatory nations to establish a National Focal Point that will act as a liaison point with the World Health Organization (WHO) and public health bodies within each nation. National Focal Points are critical to the implementation of the IHR as they conduct the communications aspects of the IHR, both within countries and internationally. Under the IHR, each State Party is required to designate or establish an NFP, a national office or centre (not individual person) that is accessible at all times for IHR-related communications with the WHO and relevant sectors within the country. As the designated point of contact between the WHO and State Parties, it is essential that NFPs are provided with the necessary authority, capacity, training and resources to effectively carry out their functions required of them by the IHR.
The New Public Health	The New Public Health is a contemporary application of a broad range of evidence- based scientific, technological, and management systems used to implement measures to improve the health of individuals and populations. Its main objectives are the political and practical application of lessons learned from past successes and failures in disease control and the promotion of preventive measures to combat existing, evolving and re-emerging health threats and risks.
Non-communicable Disease	Non-communicable diseases, also known as chronic diseases, are not passed from person to person. They tend to be of long duration and are the result of a combination of genetic, physiological, environmental, and behavioural factors. This includes a diverse group of diseases/conditions, such as heart disease, cancer, and arthritis.

Term	Definition
One Health	One Health frameworks recognise that the health of people is inter-connected to the health of animals and our shared environment. The approach mobilises multiple sectors, disciplines, and communities at varying levels of society to work together. From a public health perspective, One Health acknowledges that we cannot achieve optimal health of the global human population if agri-food systems are broken, the environment is polluted, or veterinary systems and services are not adequately resourced to control zoonotic diseases. The complexity surrounding transmission of diseases at the animal–human–ecosystem interface highlights the need for multidisciplinary approaches – known as One Health approaches.
Pandemic	A pandemic is an epidemic that affects the entire world, such as the worldwide spread of a new disease or the COVID-19 pandemic. The World Health Organization is responsible for declaring when a global pandemic is occurring.
Personal protective equipment	Personal protective equipment (PPE) is anything a worker uses or wears to keep them healthy and safe. For example, PPE for COVID-19 includes surgical masks, particulate filter respirators (such as P2 or N95), gloves, goggles, glasses, face shields, gowns and aprons.
Preventive health	Preventive health aims to prevent disease, illness and injury, while also promoting and raising awareness of good health and wellbeing.
Primary Health Networks	Primary Health Networks are Australian Government-funded primary health care organisations which coordinate primary health care delivery and address local health needs and service gaps.
Public health	Public health involves activities aimed at benefiting a population, with an emphasis on prevention, protection, and health promotion as distinct from acute treatment tailored to individuals with symptoms.

Term	Definition
Wider determinants of health	The wider determinants of health are the non-medical factors that influence health outcomes. Factors such as socioeconomic position, conditions of employment, the distribution of wealth, empowerment, and social support act together to strengthen or undermine the health of individuals and communities. The wider determinants of health include: • early childhood development • community and family safety • education and youth • employment and income • racism • housing • environment and infrastructure • interactions with government systems and services • law and justice • poverty • food security, and • experiences with alcohol, tobacco, and other drugs.
Wellbeing	Wellbeing is not just the absence of disease or illness, it is the complex combination of a person's physical, mental, emotional, and social factors. Wellbeing is strongly linked to happiness and life satisfaction.

Guiding Questions

Functions of the CDC

1. **What decision-making responsibilities, if any, should the CDC have?**

   - Should the CDC directly take on any existing responsibilities, or provide a coordinating and/or advisory function only? And if so, would that be sufficient for responding to health emergencies?

2. **What functions should be in and out of scope of the CDC?**

   - What should the role of the CDC be in promoting or coordinating a One Health framework?

3. **What governance arrangements should be implemented to ensure public confidence in the CDC?**

   - How can the CDC balance the need for the CDC to be responsive and accountable to governments, while also providing trusted, authoritative, and evidence-based advice?

   - What aspects of independence do you believe are important to the successful function of the Australian CDC?

   - How should the CDC be organisationally structured to best meet the needs of Australia's federated society?

Why do we need a CDC?

A coordinated and national approach to public health

4. **How can the CDC best support national coordination of the Australian public health sector?**

   - How can the CDC ensure effective collaboration and exchange of information with relevant stakeholders, including engagement with the private sector?

5. **What lessons could be learned from Australia's pandemic response?**

   - How can the CDC best ensure linkages with all sectors relevant for preparedness and response – including primary care and the animal and environmental health sectors?

   - Are there any national, state and territory or international reviews that would be of assistance in designing the CDC?

A data revolution

6. **What are the barriers to achieving timely, consistent and accurate national data?**

7. **What existing data sources are important for informing the work of the CDC, and how could existing data bodies (national, state and territory) be utilised and/or influenced by the CDC?**

   - Is there data currently not collected in Australia which should be considered?

- What else is needed to ensure that Australia is able to identify emerging risks to public health in a timely way?

- Would the development of a national data plan with an agreed scope and/or an evidence-based health monitoring framework be useful?

8. **What governance needs to be in place to ensure the appropriate collection, management and security of data?**

9. **How do we ensure the CDC has the technical capability to analyse this data and develop timely guidance?**

10. **How can the CDC ensure collaboration with affected populations to ensure access to, and the capability to use, locally relevant data and information, particularly as it relates to First Nations people?**

National, consistent and comprehensive guidelines and communications

11. **How can the CDC establish itself as a leading and trusted national body that provides guidance to governments based on the best available evidence, and participates in generating that evidence?**

- To what extent should the CDC engage with the media, public messaging and health communications directly or via other existing structures such as Australian and state and territory health departments?

- What could the CDCs broader role be in increasing health literacy to support sustained improvements in health outcomes?

12. **To what extent should the CDC lead health promotion, communication and outreach activities?**

13. **Are there stakeholders outside of health structures that can be included in the formulation of advice?**

- What kind of mechanisms could be developed to support broader consultation on decisions when needed?

National Medical Stockpile

14. **What has your experience, if any, been of accessing supplies from the National Medical Stockpile (either before or during COVID-19), and can you identify any areas on which the CDC could expand or improve?**

World-class workforce

15. **How could a CDC work to ensure that our public health workforce is prepared for future emergencies, both in Australia and abroad?**

16. **How could the CDC support and retain the public health workforce in reducing the burden of non-communicable disease?**

Rapid response to health threats

17. **What role could the CDC play in greater national and international collaboration on One Health issues, including threat detection?**

18. **What are the gaps in Australia's preparedness and response capabilities?**

- Could the role of the National Incident Centre be modified or enhanced?

- What functions should a national public health emergency operations centre deliver to strengthen Australia's coordination of health emergencies?

19. **How can the CDC position Australia, mindful of global, regional and local expertise, to be better prepared for future pandemics, health emergencies, and other public health threats?**

   - What could our contribution to global preparedness look like?

International partnerships

20. **What role should the CDC undertake in international engagement and support internationally, regionally or domestically?**

   - International engagement, coordination and intelligence sharing are central to the role of all international CDCs. What additional objectives should the CDC include? (for example, leadership, technical engagement and capacity building, or other issues?)

   - How can the CDC be utilised to strengthen pandemic preparedness internationally?

Leadership on preventive health

21. **How can the CDC foster a holistic approach across public health, including the domains of health protection, and promotion and disease prevention and control?**

22. **What role could the CDC have in implementing the goals of the National Preventive Health Strategy?**

23. **Should the CDC have a role in assessing the efficacy of preventive health measures?**

Wider determinants of health

24. **How could the CDC work in partnership with at-risk populations and associated health sectors, including First Nations people, people with a disability and older Australians, to ensure their voices are included in policy development?**

   - How could the CDC meet the intent of Closing the Gap?

25. **How can the CDC best deliver timely, appropriate, and evidence-based health information to culturally diverse and/or at-risk populations?**

26. **How should the CDC engage across sectors outside its immediate remit (including portfolios with policy responsibility for wider determinants of health, culture, and disability)?**

Research prioritisation

27. **Should the CDC have a role in advising on (or directly administering) funding or prioritisation of public health and medical research?**

The CDC Project

28. **How could the success of a CDC be measured and evaluated?**

International CDC Equivalents

This table provides a snapshot of the different components of some other public health organisations. We acknowledge that the ability to make direct comparisons is limited, and that the provided total budget figures do not separate out any grant funding for which the organisation may be responsible. The intent is to showcase their diversity and highlight some of the changes which followed COVID-19.

Table 1. Examples of key roles and funding across international equivalents

Country	Organisation Name	Financial Year	Population	Budget*	$ per-capita	% of GDP	Staff	Key roles and responsibilities	
Canada	*Public Health Agency of Canada*	18-19	37.1m	$704.3m	$19.00	.03%	2,379	• Health promotion • Disease prevention and control • Emergency preparedness and response	• Expert advice and guidance • International collaboration on public health • Design and implement national public health programs
		22-23	38.9m	$9,854.2m	$253.13	.31%	4,919		
Europe	*European Centre for Disease Prevention and Control**	18-19	511.5m	$91.7m	$0.18	.0004%	285	• Disease surveillance, evaluation, and data analysis • Expert advice and guidance	• Health workforce education and development • International collaboration on public health • Design and implement joint public health responses
		22-23	447.0m	$149.4m	$0.33	.0005%	371		
France	*French Public Health Agency*	16-17	64.7m	$2,697.7m	$41.72	.07%	625	• Health promotion • Disease surveillance, evaluation, and data analysis • Disease prevention and control • Emergency preparedness and response	• Health workforce education and development • Design and implement national public health programs • Manage national medical stockpile
		21-22	65.3m	$5,590.2m	$85.64	.12%	734		
Switzerland	*Federal Office of Public Health*	18-19	8.5m	$118.5m	$13.91	.01%	854	• Health promotion • Regulation on the use of chemicals and medicines • Regulation of medical and health professionals	• Biosafety and radiation protection • International collaboration on public health • Design and implement national public health programs
		21-22	8.8m	$150.2m	$17.07	.01%	1,116		
United Kingdom	*UK Health Security Agency*	Established 1st April 2021						• Disease surveillance, evaluation, and data analysis • Disease prevention and control • Emergency preparedness and response	• Biosafety and radiation protection • Collaborating with research institutions and labs • Expert advisory and guidance
		22-23	68.7m	$1,028.3m	$14.97	.02%	6,610		
United States	*Centres for Diseases Control and Prevention*	18-19	332.1m	$14,815.4m	$44.61	.05%	10,377	• Health promotion • Disease surveillance, evaluation, and data analysis • Disease prevention and control • Emergency preparedness and response	• Health workforce education and development • Design and implement national public health programs • Operate research institutions and labs • Provide preventive health and other specific
		22-23	338.3m	$24,507.3m	$72.44	.07%	11,765		

* Note: All $ are presented in AUD

** The ECDC's scope is extremely limited compared to other CDCs, as most European Union members additionally operate their own national public health organisations.

Appendix C

AHPPC Structure

The role of the AHPPC is to:

a) provide advice to National Cabinet, Health Ministers and Health Chief Executives Forum (HCEF) on Australia's preparedness for health emergencies and approaches to addressing any deficits, and on health protection priorities;

b) manage health emergencies, including coordinating the national health response to mass casualty and other incidents of national significance; and

c) ensure consistent timely and accurate communications between jurisdictions and other relevant organisations.

AHPPC Subcommittees

AHPPC's subcommittees are:

Communicable Diseases Network Australia (CDNA)

CDNA was originally established in 1989 as the Australian Communicable Diseases Control Network (ACDCN), as a joint initiative of the National Health and Medical Research Council (NHMRC) and AHMAC. CDNA provides national public health coordination and leadership, and supports best practice for the prevention and control of communicable diseases. It consists of representatives from the Australian and state and territory health departments, New Zealand and a range of experts who specialise in public health response, infection control, communicable disease, pathology, modelling, epidemiology, Aboriginal and Torres Strait Islander Health, surveillance and immunisation.

Public Health Laboratory Network (PHLN)

PHLN was established in 1997 as part of the National Communicable Diseases Surveillance Strategy to complement the CDNA. PHLN is Australia's leading network of public health laboratory directors, who have expertise in medical microbiology. The aim of PHLN is to provide leadership, consultation and strategic advice on all aspects of public health laboratory microbiology. Through a nationally coordinated and collaborative network, PHLN share this expertise to enhance national capability and capacity for the laboratory-based detection and surveillance of biological agents of public health significance, to ensure robust communicable disease control in Australia. It is comprised of national state and territory, expert and associate members, as well as a number of invited observers.

Environmental Health (enHealth)

enHealth is the primary structure for the delivery of environmental health advice and national leadership in Australia under AHPPC. enHealth was formed in 1999 to

support the work of the AHPPC by providing policy advice, coordination of national responses to environmental health issues, and guiding the development and coordination of research, information and resources on environmental health matters, as well as coordinating health input into environmental standards. enHealth is especially committed to addressing inequities in health status due to environmental factors, particularly in Aboriginal and Torres Strait Islander communities, and safeguarding the health of populations that are greater risk of impact from certain environmental hazards, such as children, the elderly, and people with disabilities. It provides a national focus on maintaining and improving the health of Australians by promoting a healthy environment and preventing premature death, avoidable illness and disability caused by non-communicable, non-occupational environmental and related factors.

National Health Emergency Management Subcommittee (NHEMS)

NHEMS addresses the operational aspects of disaster medicine and health emergency management in an all-hazards context, with a focus on prevention, preparedness, response and recovery. The committee has both policy and emergency response functions and plays a critical role in facilitating deployments of the Australian Medical Assistance Team (AUSMAT), through AUSMAT coordinators, to identify suitable workforce.

The committee was established in 2008 and its membership is comprised of representatives from each state and territory and Australian Government agencies with responsibilities for emergency management. The current Chair of NHEMS is Mr John Heslop from Western Australia.

Blood Borne Viruses and Sexually Transmissible Infections Subcommittee (BBVSS)

BBVSS was formed in 2006, as the HIV/AIDS, hepatitis C and sexually transmissible infections subcommittee of the Australian Population Health Development Principal Committee (APHDC). In 2012, the BBVSS joined the AHPPC structure following a restructure of committees, in recognition that there was closer alignment to the activities of CDNA and PHLN.

It is a key advisory body reporting to AHPPC on strategic policy, programs, social issues and activities related to HIV, viral hepatitis and sexually transmissible infections (STIs). The BBVSS forms part of a coordinated response across the Commonwealth, state and territory governments, key organisations, peak bodies and national research centres for hepatitis B, hepatitis C, HIV and STIs and priority populations disproportionally impacted by BBV and STI including First Nations people and culturally and linguistically diverse communities.

Advisory groups

In addition, the following advisory groups were established to provide advice during the COVID-19 pandemic:

AHPPC Aged Care Advisory Group (ACAG)

ACAG provides advice to AHPPC on matters relevant to health protection in the aged care sector, including preparation and planning for prevention, management and recovery from emergency events including infectious disease outbreaks and natural disasters in services delivering Australian Government funded aged care.

The ACAG was initially established in August 2020 as a time-limited group to support the Australian Government's ongoing response to COVID-19 in aged care. In November 2020 it was made permanent on recommendation from the Royal Commission into Aged Care Quality and Safety.

National Aboriginal and Torres Strait Islander Health Protection Sub-Committee (NATSIHP)

(formerly AHPPC Aboriginal and Torres Strait Islander Advisory Group on COVID-19)

The AHPPC Aboriginal and Torres Strait Islander Advisory Group on COVID-19 was established on 5 March 2020 to provide culturally appropriate advice to the Department of Health, including for Aboriginal and Torres Strait Islander health services and communities about COVID-19.

On 5 May 2022, AHPPC agreed that this committee should continue to provide advice on health protection matters.

Advisory Committee for the COVID-19 Response for People with a Disability

The Advisory Committee for the COVID-19 Response for People with a Disability provides expert advice on the health care needs of people with disability, their families and the disability service sector. This includes access to COVID-19 screening, prevention and health care.

This advice helped to develop the Management and Operational Plan for COVID-19 for People with Disability. The committee meets regularly to discuss COVID-19 issues relevant to people with disability. The committee has also participated in several Roundtable discussions with a broader range of stakeholders across the disability sector.

Infection Control Expert Group (ICEG)

The Infection Prevention and Control Expert Advisory Group (IPCEAG) was established in 2014 by AHPPC to develop national infection prevention and control (IPC) guidelines for hospitals, to complement the CDNA's system of national guidelines (SoNGs) for public health units in response to the Ebola outbreak.

The Infection Prevention and Control Expert Group (ICEG) was established with the support of AHPPC on 29 January 2020, in response to the COVID-19 pandemic, to create additional IPC guidelines for primary/community healthcare setting, residential care, workplaces and the community more generally.

Culturally and Linguistically Diverse Communities COVID-19 Health Advisory Group (CALDAG)

On 8 December 2020, CALDAG was established to support the Australian Government to coordinate an evidence-based response to the COVID-19 pandemic. It provides advice and recommendations to the Australian Government to improve health outcomes and mitigate the health impact of COVID-19 for people from multicultural backgrounds and their communities. It works closely with the National COVID Vaccine Taskforce to ensure the design and implementation of the COVID-19 Vaccine Program is culturally safe and accessible for everyone.

Membership

AHPPC core membership consists of each HCEF member jurisdiction, a representative from the New Zealand Ministry of Health, a person representing Aboriginal and Torres Strait Islander views and the Commander Joint Health, Australian Defence Force. Each jurisdiction is represented by the Chief Health Officer or a deputy who has authority to make decisions or commitments on behalf of their jurisdiction.

If a member cannot attend, an alternative representative may attend as a proxy.

Advisory members, to be invited on an as needs basis, include:

- the Chairs of each AHPPC subcommittee and advisory group
- the Director General, Emergency Management Australia, and
- the Executive Director of the National Critical Care and Trauma Response Centre.

Competing priorities

There is cross membership with AHPPC and its subcommittees. We are aware that many AHPPC CHO members are also their jurisdiction's Chief Biosecurity Officers.

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All information in this publication is correct as at 2 November 2022