CAPHIA

COUNCIL OF ACADEMIC PUBLIC HEALTH INSTITUTIONS AUSTRALASIA

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Written submission in response to

ROLE AND FUNCTIONS OF AN AUSTRALIAN CENTRE FOR DISEASE CONTROL

ABOUT CAPHIA

The Council of Academic Public Health Institutions Australasia (CAPHIA) is the peak organisation that works to advance public health education and research. CAPHIA leads and represents public health in universities throughout the Australasian region. Across our 39 member institutions, we represent thousands of public health educators, researchers, workforce developers and students. CAPHIA delivers professional development programs, advocates for academic public health and actively contributes to local and global partnerships and networks.

SUBMISSION FOCUS

CAPHIA's submission focuses on our core expertise: academic public health. As such, we primarily address consultation questions relating to world-class workforce, rapid response to health threats and leadership on preventive health.

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About CAPHIA

The Council of Academic Public Health Institutions Australasia (CAPHIA) is the peak organisation that works to advance public health education and research and leads and represents public health in universities throughout the Australasian region. Across our 39 member institutions, we represent thousands of public health educators, researchers, workforce developers and students.

The CAPHIA Competencies [1] outline the knowledge, skills and capabilities specified for public health graduates at each level of tertiary education. These inspire both university public health curricula [2, 3, 4] and Public Health Officer Training [5].

Our mission is to establish the highest academic standards in public health education and research, act as a respected voice for academic public health, and advocate for the development of the Public Health workforce who are being educated or practising within Australasia [6].

CAPHIA acknowledges the Traditional Custodians of the country throughout Australia and their connections to land, sea and community, and recognise their past and ongoing contributions to generation of knowledge systems. We work in partnership with First Nations people across Australasia to promote quality, culturally safe education in public health.

Introduction

As outlined in the Call for Submission, an Australian CDC should consider a range of elements to establish robust and effective operations. As CAPHIA membership represents 33 Australian universities and two affiliate institutional members, we set the standard for academic public health curricula and are well placed to make recommendations on education and training requirements of CDC professionals.

We welcome the opportunity to share our perspectives and recommendations to build our desired future state: a sustainable, scalable, appropriately resourced and highly-educated public health workforce to best support the Prevention-Promotion-Protection aim of the CDC. We look forward to enacting the mechanisms and recommendations outlined below with you.

Feedback on CDC Strategic Intent

Mission Statement

CAPHIA recommends simplifying the draft mission statement to:

> "*The CDC's mission is to drive better health outcomes for all Australians and protect our country from significant health threats that we face now, and into the future*."

Slightly modifying the first sentence in the draft mission statement captures the desired future state and the value-add of the CDC. By acknowledging both existing and emergency threats the holistic/all hazards approach is encapsulated. Moreover, the removal of "national" enables the focus on that which is considered significant - locality, community etc.

Purpose

CAPHIA broadly supports the purpose with further comments outlined in Appendix 1.

Structure

To establish the CDC as the trusted source of Public Health truth in Australia, it must become an independent, statutory body. This sends the signal of genuine commitment to prevent, promote and protect the health of all Australians.

For the CDC to be seen as the source of truth for Public Health it MUST be independent from government while maintaining productive relationships with jurisdictions and key stakeholders, including peak bodies, non for profits and appropriate industry partners.

Submission Focus

CAPHIA's submission focuses on our core expertise: academic public health.

World Class Workforce:

Invest in developing a sustainable, scalable and highly-educated public health workforce by removing barriers to entry, barriers to practice and barriers to expertise.

Rapid Response to Health Threats:

Lead the National Preventive Health Strategy 2021-2023 and invest in enabling capabilities early to rapidly respond to existing and emergent health threats.

Leadership on Preventive Health:

Become the trusted independent, statutory body for Public Health and embed all domains/ subspecialities via CDC structures, collaboration and advisory mechanisms.

As such, this submission will respond to the following guiding questions from the Australian CDC Consultation paper:

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?

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?

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?

CAPHIA Response

Recommendations

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

World Class Workforce

1. Develop a strengths map of the Australian Public Health workforce.
2. Advocate for increased government subsidised or financially supported places (e.g CSPs) in tertiary Public Health education.
3. Increase workforce capability by introducing alternative pathways to entering the public health workforce

4. Create paid workplace-based learning opportunities in the CDC for students and early career Public Health Practitioners.
5. Support the development of micro credentials for Public Health Practitioners for continuing professional development.
6. Support the development of micro credentials for Public Health policy and decision-makers.
7. Embed a mentoring program in the CDC.

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

8. Build connection mechanisms to drive collaborative and innovative Public Health.
9. Create an opt-in Public Health workforce register for all Public Health Practitioners.
10. Fund a National Public Health Officer Training Program.

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?

Rapid Response to Health Threats

11. Invest in rapid upskilling, cross-skilling and professional development pathways for Public Health Practitioners
12. Develop an awareness campaign to build the profile of Public Health to drive trust, understanding and uptake of initiatives.

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?

Leadership on preventive health

13. Include all subspecialties/domains of Public Health in the CDC scope.
14. Establish Protection, Prevention, Promotion-focused departments and embed collaboration mechanisms between domains of practice.

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

15. Include Preventive Health in Phase 1 of the CDC.
16. Take carriage of the National Preventive Health Strategy and guide its implementation.

A 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?

Australia has one of the best Public Health education systems in the world and significant infrastructure and expertise to meet both short term needs (e.g. rapid upskilling and certifications as part of emergency response) and long term investment in our leaders (e.g. Public Health Officer Training Programs, Continuing Professional Development pathways). What is missing though, is Government support and funding to scale up existing public health education infrastructure and build evidence to meet evolving workforce needs. By leveraging peak organisations such as CAPHIA to identify workforce gaps, strengths and opportunities the Australian CDC could efficiently and effectively grow public health workforce capacity.

To support the public health workforce during a health emergency the CDC also need to prioritise data accessibility and harmonisation across all regions of Australia as well as enhance surveillance and disease

reporting mechanisms. Similarly, given the connectedness of our world, investment is required in global engagements- particularly with our neighbours in the IndoPacific region should be prioritised by the CDC. Establishing strong relationships will strengthen any local response required in times of emergency.

The CDC could provide:

- **Mapping of the public health workforce in order to better understand gaps, regulatory barriers and aid in future planning.**
- **A permanent register, and training, for a reserve of public health workers who can be surged in times of crisis**

Understanding the current state of our Public Health workforce is a key step to becoming better prepared for National and global emergencies. To understand the current state of the workforce to inform planning and targeted education and training CAPHIA recommends the following:

Recommendation 1: Develop a strengths map of the Australian Public Health workforce

CDC's role: Lead (directly or indirectly)

Recommended prioritisation: Phase 1

Understanding our current state is a key step in becoming better prepared for National and global emergencies. Addressing known and emergent health threats are not possible without an educated, scalable and sustainable public health workforce.

Whilst the emergency workforce surge response during COVID-19 was adequate, this varied between jurisdictions and was impaired by suboptimal jurisdictional communication, data accessibility, resourcing and process efficiencies. Until we can answer basic questions related to workforce characteristics, individual competencies, and education and training standards, we are unable to manage our public health workforce. This evidence-based approach is supported by the Global Network for Academic Public Health who advocated for research into workforce capacity, skills and knowledge, as well as job and career opportunities to inform future planning [7]. Enacting on this idea, CAPHIA created an open access Public Health Course Directory [8] to enable potential students to search for degrees, short courses and micro credentials. This could be expanded and enhanced to develop a map of teaching and research strengths and gaps. By correlating workforce needs with demonstrated gaps in educational offerings, priority areas for additional training and professional development programs could be identified, aiding in future planning.

The CDC could provide:

- **Increased workforce capability across all disciplines to support national leadership and coordination**

Recommendation 2: Advocate for increased government subsidised or financially supported places (e.g CSPs) in tertiary Public Health education.

CDC's role: Advocate

Recommended prioritisation: Phase 2

To increase workforce capability across all disciplines of Public Health, the CDC is well placed to advocate the government for funded or financially supported places in tertiary Public Health education. This could be in the form of increased Commonwealth Supported Places (CSPs) in public health degrees and making these more widely available. Other government funded sponsored scholarships, stipends or research cadetships for higher degree research at partner universities may also be of benefit to meet equity and access targets.

Other parts of the health workforce (e.g. medical degrees) have their pipeline enabled by dedicating a percentage of CSPs with conditional arrangements [9]. Public health courses do not have the same long-term protection or access to industry scholarships or stipends. This results in fewer levers to actively manage the supply of formally educated Public Health Practitioners. Secure financial support for tertiary education will ensure the high-level analytic skills necessary to address emergency situations as we have recently seen with COVID-19.

In line with our previous call to action [10], we recommend the CDC advocate for the government to increase available CSP allocation for Public Health degrees and/or other government sponsored scholarships, stipends or research cadetships for research Masters and PhDs. This will ensure the public health workforce reflects the community it serves.

Recommendation 3: Increase workforce capability by introducing alternative pathways to entering the public health workforce

CDC's role: Advocate

Recommended prioritisation: Phase 1

To develop a workforce reflecting the diverse communities being served, Public Health Practitioners from a range of backgrounds are required and desired. Recognising the diversity of the public health workforce (healthcare sector, urban planning, agriculture, and veterinary medicine) and linking these workplaces to opportunities for formal qualifications will reinforce a public health perspective throughout the workforce. Advocating for alternative pathways into Public Health programs would drive equity and increase workforce capability by providing education opportunities to those ineligible based on common entry requirements. This includes undergraduate and postgraduate students as well as workers from diverse professional and educational backgrounds and lived experience. Government investment into alternative Public Health program entry options will allow everyone in the public health workforce to formalise essential public health knowledge and understanding.

Recommendation 4: Create paid workplace-based learning opportunities in the CDC for students and early career Public Health Practitioners.

CDC's role: Lead (Directly or indirectly)

Recommended prioritisation: Phase 2

Workplace-based learning is critical to building a workforce qualified to respond to public health emergencies and address community needs [11-14]. To foster this, we recommend the Australian CDC support paid internships, work-integrated learning, graduate programs or similar offerings within the institution to Public Health students and trainees. This will provide students and trainees with knowledge and experience rooted in best practices across all national and global sectors. This will also attract and retain high achieving Public Health students to assist the CDC be an employer of choice.

CAPHIA's role as a peak body working with academic institutions throughout Australia places us at the forefront of public health education. We welcome any collaboration with the CDC to provide practice-based learning for public health students and early career Practitioners.

Recommendation 5: Support the development of micro credentials for Public Health Practitioners for continuing professional development

CDC's role: Lead

Recommended prioritisation: Phase 1

Public health is an evolving specialty which requires deep connections between academia, workforce, government agencies and relevant global health for-purpose organisations to rapidly respond to emerging health threats.

Government funded short courses and micro credentials are a practical and efficient mechanism to quickly upskill, cross-skill and develop knowledge and capabilities. As public health education continually evolves and develops in line with research innovation and best practice, policy and practice must be informed by this most up to date knowledge and research. We recommend advocating for additional government funding for the continued professional development, education and training of Public Health Practitioners.

The results of a "workforce strengths map" (Recommendation 1) can inform and identify priority areas for tailored professional development programs, short courses and micro credentials. For example, this could include investment in micro credential training and education related to digital health and health information management, one health, public health ethics etc. Continuing professional development will better prepare the workforce for a future health threat by ensuring the existing workforce leverages contemporary knowledge and skills in their public health practice.

Through our membership of the Global Network for Academic Public Health (GNAPH) (an alliance of regional associations representing schools of public health worldwide) CAPHIA representatives and member institutions are well placed to consult and collaborate with other interested organisations on the development and implementation of public health workforce professional development. Our members not only represent best practice and the highest educational standards but can integrate the most innovative local and international knowledge, research and practice into the workforce.

Recommendation 6: Support the development of micro credentials for CDC Public Health-adjacent staff.

CDC's role: Lead

Recommended prioritisation: Phase 2

Public health decisions and the dissemination of public health information and knowledge are not just made by those who have been educated and/or experienced in public health, but also by local, national and global leaders in related and adjacent fields [7]. As such, education and training for all involved in public health is vital in building and maintaining a strong public health knowledge base.

To equip these public health decision makers with basic public health knowledge and skills, CAPHIA recommends the development of decision-maker short courses and/or micro credentials. These would support communication and collaboration between public health practitioners and policymakers across sectors while additionally reinforcing standardisation of knowledge across government and advisory groups that would support a HiAP approach to governance.

In recent years there has also been significant growth in the need for data scientists and data analytics specialists and their utility has been demonstrated during the pandemic. Integration of public health competencies as applied to these skills would enhance application of these skills in the CDC and encourage these professionals into public health more broadly.

These micro credentials could also be prioritised and scoped based on the findings from the proposed "workforce strengths map" (Recommendation 1). To provide an appropriate level of education and training to meet these needs, strong partnerships and a high level of collaboration with universities is necessary. Academics and public health institutions must work closely to ensure education and training is fit for purpose to meet workforce needs. CAPHIA is well placed to facilitate and support strong partnerships and high-level collaboration with member universities and other interested organisations.

Recommendation 7: Embed a mentoring program in the CDC.

CDC's role: Lead

Recommended prioritisation: Phase 2+

Mentoring is a well-known mechanism to develop capability, increase capacity and retain the workforce. International CDC models typically embed mentorship as in new field worker training experiences [11-14]

and experienced field mentors review trainee work, provide professional support and advice, and ensure the trainee meets learning competencies [11]. This process not only ensures a robust training program but provides a sustainable pool of graduates to train the future workforce [11, 13, 14].

As observed in other CDC field training programs, these formal mentorship structures allow trainees to acquire new skills and strengthen the transfer of knowledge between professionals. Field mentors also assist with a trainee's leadership development [15] and imparts a sense of institutional culture, awareness and collaboration skills [16].

Formal or structured mentoring can occur in many forms, ranging from the intense supervision seen in other CDC field training programs [11-14] or in a more condensed work experience 'rotation' program as highlighted below:

> *Mid career professionals are temporarily assigned to a different part of their organization*: *The CDC Office of the Associate Director for Science offers these up to eight times per year to scientists across CDC. The rotation goals are to develop skills in scientific leadership, administration, and review and to broaden rotation participants' view of both the agency and possible career paths.* [15, p.329]

CAPHIA recommends that a mentor program is established for CDC employees to enhance their capabilities, build their capacity and enhance their ability to serve Australians.

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

Noncommunicable diseases (NCDs), the social determinants of health and other health threats (i.e. injury, health equity, the climate crisis etc.) are complex. Solving these challenges requires input from individuals across the spectrum of public health, those with diverse lived experience and cannot focus only on medical practitioners. By enhancing workforce capability and embedding mechanisms to support continuous professional development opportunities across Public Health, the Australian CDC could bring together communities of practice to collaboratively problem solve and tackle the larger health threats related to NCDs and determinants of health. The CDC is also well placed to be a source of truth for the public health workforce by providing a resource hub in NCDs to aid in evidence-based intervention planning, delivery and evaluation.

The CDC could provide:

- **Increased workforce capability across all disciplines to support national leadership and coordination.**

As workforce capacity building initiatives require months or years for return-on-investment, we urge the CDC to invest early. Early investments will prepare the workforce for future emergencies and make significant progress in preventive health. In addition to the mechanisms listed in recommendations 1 to 8 above we recommend the following:

Recommendation 8: Build connection mechanisms to drive collaborative and innovative Public Health

CDC's role: Lead

Recommended prioritisation: Phase 2

To make the best use of evidence-based research in both practical and academic public health contexts, the collaboration between public health researchers, educators and practitioners is needed. This allows for

innovation (including those to address NCDs and determinants of health) and provides national forums for addressing challenges and sharing solutions throughout the public health workforce.

International CDC models provide useful examples of how collaboration and discussion of key public health concerns are fostered through discussion forums. For example, the American CDC hosts collaborative events between clinical and public health laboratory professionals [17], fostering connections in public health related laboratory practices, upskilling in new technology and learning and development tools. This supports a unified response to workforce education and training needs.

Similarly, the Canadian Public Health Association (CPHA) held the COVID-19 and Public Health Forum to exchange knowledge, research, best practices and policies among a variety of public health and allied health professionals, policymakers, academics and students [18]. The presence of researchers, academics and policymakers is central to CPHA events [19] and indicates the vital importance of academic research to establish best practices in public health.

In an Australian context, to support engagement with public health academics, researchers and practitioners, the CDC should consider:

- Establishing a Centre of Excellence to encourage regular connections inside and outside the CDC with public health experts, consumer representatives and others associated with public health outcomes;
- Hosting summits, workshops, hackathons etc. to develop cross-disciplinary positions and approaches to all hazards and identify novel problem solving methodologies; and
- Hosting forums to showcase best practice, connect and teach public health communities of practice and connect Public Health Practitioners within and between regions and subspecialties.

Recommendation 9: Create an opt-in Public Health workforce register for the whole Public Health workforce

CDC's role: Lead

Recommended prioritisation: Phase 1

CAPHIA supports the CDC suggestion to take a holistic approach to the workforce, and not just develop those with subspecialisation in epidemiology etc. To respond to all hazards and actively manage our response, we first need to understand our whole Public Health workforce (Recommendation 1) - not just those focused on emergency response. An opt-in public health workforce registry would provide the CDC with an accurate picture of its Public Health Workforce so that self-identified public health workers can be contacted and included in strategic planning, and health promotion initiatives in their area of specialty, qualifications and contact details. A register could also include options to contact known individuals (Recommendation 1) for rapid upskilling or training as a surge workforce in an emergency response. It could also be leveraged to progress established programs addressing existing NCDs. Further, by registering the entire Public Health workforce, the national workforce will be better managed and provide decision-makers with evidence to match supply and demand in different jurisdictions. The register could also be leveraged to identify representatives when forming CDC expert advisory groups and also facilitate connections between the CDC workforce, professional organisations and expert communities – including academics – to ensure consistency of reporting standards at the local and national levels.

To inform international responses to health threats, we also suggest the register include individuals working in global settings. For example, CAPHIA representatives are involved with many global initiatives and organisations such as the World Health Organization and the World Federation of Public Health Associations

Professional Education and Training Group. By documenting individuals and organisations connected to these organisations, an Australian CDC could access expertise related to expected and unexpected global public health challenges.

The CDC could provide:

- **National public health training that does not supplant existing state or territory training, but further develops the capability of the public health workforce and ensures nationally consistent approaches including emergency response**

Recommendation 10: Fund a National Public Health Officer Training Program

CDC's role: Lead

Recommended prioritisation: Phase 1

Few senior Australian public health leaders leading large and complex public health portfolios are systematically trained in public health. Currently, Australia lacks mechanisms to sustainably develop expert Public Health Practitioners to fill this gap. To address this challenge, the CDC could fund and implement a national Public Health Officer Training Program (PHOTP) thus investing in the Public Health workforce as we do with our medical workforce. Previously we have advocated for investment in a national PHOTP to develop more Public Health experts to inform best practice decisions. [10] Public Health Officer Training Programs in all regions would ensure a spread of skills and capacity and provide local public health leaders with understanding of, and direct experience with, the specific needs of their populations.

We also recommend a model where the CDC provides guidance to all state-based PHOTPs. This would enable States and Territories to modify their own PHOTP programs to meet specific population needs, including in regards to local community health, such as Aboriginal and Torres Strait Islander or rural and remote communities, and health targets or accelerate existing programs and initiatives and remain consistent with the goals of the national PHOTP program. It is also worth noting the central importance of cultural competence and cultural safety for supporting health and addressing key public health concerns in all Australian communities.

In this mode the CDC could directly monitor and evaluate the effectiveness or outsource this function. Whilst CAPHIA is encouraged by the example of the European Center for Disease Control (ECDC) in the Call for Submission when considering the development of a highly effective Australian CDC workforce, CAPHIA recommends leveraging many of the infrastructure and approaches led by the American CDC [11] (Box 1).

Box 1. Case Study: The United States of America CDC [11]

A strength of the American CDC is its clear focus on the workforce as an enabling capability to respond to all hazards. This includes:

- Including "diverse public health workforce" and "strong global capacity and domestic preparedness" as two of their five core capabilities
- A *Recruit, Train, Forecast* strategy to effectively respond to rapid upskilling/retraining as part of an emergency response
- Development of 70-90 experts per year in their 2-year workplace-based Field Epidemiology Training Program with a curriculum including Epidemiologic Methods, Biostatistics, Public Health Surveillance; Laboratory and Biosafety; Communication; Computer Technology; Management and Leadership; Prevention Effectiveness; Teaching and Mentoring; Epidemiology of Priority Diseases and Injuries. This has led to over 2,550 field epidemiologists from a diverse range of backgrounds. Many of these graduates become leaders in the American CDC, other government

> agencies and local and multinational non-government bodies and community-facing organisations. This program informed the development of many similar programs, including the highly successful NSW Ministry of Health Public Health Officer Training Program.

This includes committing to workplace-based training and education opportunities at all stages for Public Health Practitioners, in either a national PHOTP or other specialist training programs [20] (Box 2). This could include paid internships, capstones and mentoring programs within and across Public Health subspecialties. CAPHIA also supports growth of field epidemiology training programs delivered across a range of tertiary institutions. Collectively these investments provide mechanisms to develop and maintain a strong, diverse, well-educated and deeply experienced Australian Public Health workforce to address all hazards.

Box 2. Case Study: Medical Specialist Training Programs [20]

Health Professionals, such as doctors and nurses treat hundreds or thousands of patients individually over the course of their careers. For example, in 2021 Australian Primary Care General Practitioners saw 22,683,297 patients and provided 191,987,310 services [21]. Public Health Practitioners have the potential to impact thousands or even millions of Australians through the development of Public Health policies, programs and services.

The benefit of structured, workplace-based education is well understood with many health and medical professionals electing to undergo specialist training programs (Fellowships) with their respective Colleges. The benefit and importance of these both Fellowships and related programs is acknowledged by the government through its significant and sustained investment into initiatives such as the Specialist Training Program [20]. The two aims of the Specialist Training Program, namely to:

> "improve the specialist workforce by providing quality training posts in different settings to broaden the participants' experiences;
> increase the number of specialists working in regional, rural and remote areas…"

This could equally apply to Public Health Practitioners and provide benefits to a larger patient population. As with the PHOTP, health and medical Fellowship are clearly aligned to a curriculum and occur in prescribed workplace rotations which balance place (e.g. metro, rural and remote) with areas of subspecialist practice. Fellowships are a tried-and-tested method of developing and maintaining individual competence in a health or medical specialisation. To develop the desired future public health workforce, investment in Public Health specialisation needs to occur.

Rapid Response to Health Threats

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?

The questions posed in the CDC consultation document focused on the mechanics of responding to health threats. However, clear investment to enable the capabilities and foundations of the Australian Public Health system will progress Australia towards the desired to be better prepared in the future.

Recommendation 11: Invest in rapid upskilling, cross-skilling and professional development pathways for Public Health Practitioners

CDC's role: Lead

Recommended prioritisation: Phase 1

As we outlined previously, investment in the development of micro credentials, short courses and similar programs would enable Public Health Practitioners to better maintain their standard of practice, learn new

or emerging areas of Public Health, and quickly transfer to areas of need as part of a surge or emergency workforce. There is also a need for Public Health Practitioners to take on leadership roles across disciplines supporting a Health in All Policies (HiAP) approach to governance.
Currently, though, standard pathways do not exist to upskill, cross-skill or support continuing professional development of Australian Public Health Practitioners. Yet rapid education, training and upskilling are essential parts of pandemic preparedness and identification of Public Health Practitioners is imperative for an effective, holistic surge workforce.

To effectively operate the Australian Public Health workforce, rapid investment in high volume, short course training is needed. This training must be available to both public health practitioners and health professionals and is essential in maintaining a high standard of skills and practice in the workforce. This type of training should focus on preparedness, surveillance and emergency response as well as basic public health knowledge and awareness for all professionals, even in adjacent fields of public health. This could include economics, finance, law, trade and journalism as well as political leaders, their advisors and even the general public. This training supports a HiAP approach as it will significantly increase the general public health knowledge base across sectors. This allows for a higher level of interdisciplinary and intersectoral discussion, planning and decision-making in public health policy making as well as government and related fields.

Upon CAPHIA's review of nine global CDC models, a key finding was the clear investment in workforce education including upskilling and continuing education. China and England, for example, both feature traineeships to ensure the ongoing professional development of Public Health Practitioners [22, 23]. Further international CDC models also utilise e-learning, like the ECDC virtual academy [24]. This facilitates not only ongoing professional development but fosters inclusion across the workforce including in rural and remote communities.

Recommendation 12: Develop an awareness campaign to build the profile of Public Health to drive trust, understanding and uptake of initiatives

CDC's role: Lead (directly or indirectly)
Recommended prioritisation: Phase 2+
Public health exists to improve health outcomes for communities and patient populations. Awareness builds trust, understanding and uptake of Public Health initiatives. Bringing the Australian public along on the journey about what Public Health is and does would prepare everyone for future health threats. CAPHIA recommends investment in a Public Health awareness campaign, akin to that led by the Association of Schools and Programs of Public Health (ASPPH), to build the profile and increase trust in, and uptake of Public Health programs and practice. Health literacy is also fundamental in building these elements of awareness of public health. Outreach initiatives targeted at improving health literacy are a significant aspect of health promotion that can drive trust-building and increase understanding that supports community health throughout the country.

Box 3. Case Study: This Is Public Health [25]

In 2008, the Association of Schools and Programs of Public Health (ASPPH) launched This Is Public Health (TIPH) to raise awareness of public health education and career opportunities. Beginning as a social media campaign, TIPH expanded into a platform for educating the public as well as increasing interest and enrolment in worldwide public health programs. A partnership with the association of Schools of Public Health in the European Region (ASPHER) in 2019 saw the further expansion of the platform.

TIPH operates through engagement by sharing experiences and knowledge both online and within the community. This is accomplished through a variety of activities and events, including social media

outreach, graduate fairs and the appointment of student ambassadors. Partner organisations promote health and health awareness, further increasing engagement with new audiences on a global scale. Major TIPH partners include the National Association of Advisors for the Health Professions, the European Public Health Association and the Global Network for Academic Public Health (GNAPH).

TIPH offers an extensive library of resources to promote awareness of key public health concerns, theory and practice. This library includes public health news media, a book club and podcasts. @TIPHtweets on Twitter share informative articles, event announcements and featured ambassador presentations giving a picture of an accessible international public health network strongly relevant to today's global workforce.

TIPH continues to grow as a brand, with over 48 700 social media followers and more than 100 000 annual views of the digital resource library. The TIPH brand recognition continues to grow and relevant documents are available in 35 languages.

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?

Public Health is a complex specialty and crosses into many other professions and domains including but not limited to:

- educators, researchers and evaluators
- epidemiologists and biostatisticians
- policy writers and program designers
- allied health professionals
- lawyers, ethicists, urban planners and engineers
- clinicians and practitioners
- health and community workers, including health promotion practitioners, as well as managers and leaders. [26]

Overall, this diversity in Public Health Practitioners, policy-makers and decision-makers positively impacts the populations they serve. Collaborative and multisectoral action by a diverse set of Public Health Practitioners, government sectors and decision-makers are a central feature of modern public health practice and can improve health. [27] To foster a holistic approach to Public Health, CAPHIA calls on the Australian CDC to include preventive health in its scope. Our recommendations are as follows.

Recommendation 13: Include all subspecialties/domains of Public Health in the CDC scope.

CDC's role: Lead

Recommended prioritisation: Phase 2+

Inclusion of all professions and domains of Public Health is advised to enable the 'Prevention-Promotion-Protection' scope of the CDC. Rather than standing up a unit or department for each public health domain or subspecialty, mechanisms to rapidly engage experts, apply practice "lenses", consultations etc. are needed. This will optimise CDC Public health policy and practice. If the peak national public health agency limited to strict public health domains focusing on preparedness, planning and response would dramatically reduce the efficacy of CDC Policy and Practice. It also limits the pool of potential employees and their skill sets, capabilities and experiences when solving Public Health challenges.

Recommendation 14: Establish Protection, Prevention, Promotion-focused departments and embed collaboration mechanisms between domains of practice

CDC's role: Lead

Recommended prioritisation: Phase 1

As outlined in our response to consultation question 16 (Recommendations 8-11), mechanisms driving collaboration and innovation between Public Health Practitioners will be crucial to avoid silos and ensure a holistic, best practice Australian CDC.

International CDC models follow similar organisational structures to each other. This includes a 'Director' or 'Chief Executive' who oversees CDC operations and has five to six 'Directors' or 'Chief Scientists' in charge of the following eight departmental units: 'Surveillance' which included both communicable and NCDs; 'Non-infectious disease' units which could include injury prevention and chronic disease; 'Infectious Disease' including vaccination and identifying new and emerging diseases; 'Health Promotion'; 'Emergency Response or Preparedness'; 'Communication' or 'Scientific Advice; 'Emergency Response'; 'Building and sharing scientific evidence'.

A holistic approach to the Australian CDC would, similar to the United Kingdom, include an "Office for Health Improvement and Disparities (OHID)" in the United Kingdom, where a specific department focuses on improving health improvement and addressing population health issues.[28]

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

Public Health and preventive health are chronically underfunded which is contributing to unhealthy Australians and an overburdened health system. An overburdened system does not have the capacity to meet new demands, particularly in a crisis. In the latest federal budget health spending will account for 16.8% of the government's total expenditure [29]. Just over 30 million dollars of this is projected to be spent on preventive health [30]. Through the National Preventive Health Strategy, investment in preventive health will rise to 5% by 2030 [31]. Meeting this commitment would greatly reduce the health expenses required to treat illness and diseases. Further, leveraging the $12 Million underspent fund in the defunct National Preventive Health Agency would significantly contribute to meaningful progress against the aims of the National Preventive Health Strategy under the leadership of the CDC.

Recommendation 15: Ensure Preventive Health is in scope for Phase 1 of the CDC

CDC's role: Lead

Recommended prioritisation: Phase 1

With the CDC taking a "Lead" role in the Preventive Health Strategy, Australia will be better prepared for future pandemics, health emergencies and other public health threats. A concerted effort is required to improve health outcomes for all Australians. The National Preventive Health Strategy 2021-2030 (the Strategy) aims to do this. [31] The complex and interconnected nature of both the determinants of health and health outcomes are well documented. Similarly, Public Health policy and practice do not occur in a vacuum - often initiatives addressing a target population/health issue/condition also impact others. The establishment of an Australian CDC provides an opportunity to harmonise the various programs and initiatives across the spectrum of Public Health and enable efficiencies.

Recommendation 16: Take carriage of the National Preventive Health Strategy and guide its implementation

CDC's role: Lead (strategy) Guide & Communicate (implementation)

Prioritisation: Phase 1-2

The CDC taking carriage of the Strategy [31] would provide a central, trusted body to guide its implementation. Adopting a "the earlier the better" approach to uplifting the health of Australians and investing in robust public health infrastructure will ease pressure on our overburdened health system. This frees the capacity and capability to cope with both NCDs and emergencies while reducing complex and costly presentations/cases in the next pandemic as the baseline health of Australians will be improved. CAPHIA's member institutions contain world class academics who could assist in Strategy implementation, communication of its progress and evaluation of its effectiveness. CAPHIA would be pleased to facilitate or advise on these connections.

Conclusion

CAPHIA supports the broad directions of the *Role and functions of an Australian Centre for Disease Control*. We commend the Government for progressing this and for investing $3.2M in the 2022-2023 financial year for preparation, including the face to face workshops and this written consultation. However, as the peak academic public health body setting industry education standards in Australasia, we are keen to ensure there is a significant and considered investment in the development of the national Public Health workforce and education. CAPHIA's recommendations reflect and build upon the proposed CDC Principles to drive Prevention, Promotion, and Protection for all Australians. See Appendix 1 for a summary.

The CAPHIA appreciates the opportunity to make this submission, contributing to the conversations to date and assisting in the development of a robust Australian Centre for Disease Control. Please contact us should you require additional information or have any queries in relation to this submission.

Professor Rebecca Ivers Chair, Council of Academic Public Health Institutions Australasia	Holly Donaldson Executive Director, Council of Academic Public Health Institutions Australasia

On behalf of the CAPHIA Board of Directors.

Appendix 1: Summary of CAPHIA Recommendations

CAPHIA
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SUMMARY OF RECOMMENDATIONS IN RESPONSE TO

ROLE AND FUNCTIONS OF AN AUSTRALIAN CENTRE FOR DISEASE CONTROL

Go slow to go fast: Invest in the enabling capabilities early to rapidly respond to existing and emergent health threats. This includes development of a sustainable, scalable and highly educated workforce, preventive health, big data, communication and change management.

- Create a strengths map
- Include Preventive Health in Phase 1
- Lead the Preventive Health Strategy

Be trusted and enforceable: Ensure the CDC is a well-funded, independent statutory body to become the trusted source of truth for public health in Australia.

Bring everyone on the journey: Raise the profile of public health to increase trust, understanding and adoption of CDC initiatives. Prioritise equity and existing health threats, such as the social determinants of health.

Stakeholders as champions: Embed continuous communication and feedback loops in all stakeholder groups and leverage existing organisations and networks to build awareness and, in some cases, do the work required to add value quickly.

- Build collaboration mechanisms to drive best practice public health

Assume the best, prepare for the worst: Balance investment and focus on existing health threats, such as NCDs and emergency preparedness and disaster response.

- Know your workforce - create a register for all public health practitioners
- Become surge-ready by investing in rapid upskilling, cross-skilling and professional development of public health practitioners

Invest in those doing the work and those making the decisions

- Fund development of micro credentials for public health practitioners and other CDC staff who contribute to public health
- Build workforce capability and capacity by reducing:
  - barriers to entry: Advocate for protected CSPs and build alternate pathways
  - barriers to practice: Embed workplace-based learning and a Mentoring Program
  - barriers to expertise: Invest in a National Public Health Officer Training Program

Break the mould: take a holistic approach

Australia is in a unique position to apply learning from both existing CDCs and the COVID response. We can become a global leader by including all domains and subspecialities of public health via CDC organisational structures, collaboration mechanisms and expert advice.

Appendix 2: Feedback on the proposed Purpose

Purpose

CAPHIA supports the draft purpose with the following comments:

- **Protect** - In line with "Prevention-Promotion-Protection", an all hazards approach must include addressing preventive health within the core scope of the CDC. This includes the CDC taking a leadership and coordination role of the Preventive Health Strategy, and guiding its implementation and monitoring and evaluation process to steadily progress against NCDs and other health threats, in parallel with emergency response preparations. To align with One Health principles, both known and unknown health threats must be proactively addressed to protect people, animals and the planet.

- **Gather and Analyse** - enhancing the collection, sharing and access of data is a key enabler of the value add of an Australian CDC. This is a wonderful opportunity to connect and leverage the substantial health data sets that organisations and registers hold to better inform decision making for the benefit of all Australians. Substantial expertise exists within universities, not-for-profits, government organisation at all levels and the wider public health community. The key is establishing both the trust and willingness to cooperate and the legislative ability to enforce data sharing to rapidly optimise big data utility. This dual approach reinforces the CDCs leadership role and the commitment to results. To do so, the CDC must be a well-resourced statutory body, protected from the government funding and election cycles.

- **Lead** - The value add of an Australian CDC in national and international leadership is a) leveraging and supporting existing connections and partnerships and b) establishing new mechanisms and opportunities which drive equity, innovation and collaboration. Within the Public Health community there is significant willingness to share information and contribute to drive positive outcomes for all Australians. Connecting with organisations such as CAPHIA will be instrumental in streamlining these aims.

- **Cooperate** - In addition to the development of mutual trust, for the CDC to be effective in achieving cooperation there must be both legislative imperatives and incentivisation via value-add program and services, and data and information.

- **Prioritise** - There is a substantial opportunity to drive efficiency gains in the translation of new research into Public Health policy and practice by through people-changes (e.g. communication) and technology-changes (e.g. data harmonisation). A holistic change management approach is suggested to achieve early wins and momentum.

- **Develop** - Progress against known and emergent health threats are not possible without a well-educated, scalable and sustainable public health workforce. Significant investment is required to remove barriers to entry, practice and expertise to serve both the CDC and the broader public health workforce to better serve all Australians.

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