



Australian Government

Australian Government Response to the House of
Representatives Standing Committee
on Health and Ageing report:

*Diseases have no Borders: Report on the Inquiry into Health
Issues across International Borders*

August 2018



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LIST OF ABBREVIATIONS

A*STAR	Singaporean Agency for Science, Technology and Research
Agreement	National Health Security Agreement
Agriculture	Department of Agriculture and Water Resources
AHMAC	Australian Health Ministers' Advisory Council
AHMPPI	Australian Health Management Plan for Pandemic Influenza
AHPPC	Australian Health Protection Principal Committee
AMR	Antimicrobial resistance
AUSMATS	Australian Medical Assistance Teams
AUSVETPLAN	Australian Veterinary Emergency Plan
CD	Communicable Disease
CDPLAN	Emergency Response Plan for Communicable Diseases and Incidents of National Significance
CDNA	Communicable Diseases Network Australia
COAG	Council of Australian Governments
Comprehensive Overview	System Overview of Communicable Disease Control in Australia 2012
CRE	Centres of Research Excellence
DFAT	Department of Foreign Affairs and Trade
DR-TB	Drug Resistant Tuberculosis
Ebola	Ebola virus disease
EMT	Emergency Medical Teams
GloPID-R	Global Research Collaboration for Infectious Disease Preparedness
GoPNG	Government of Papua New Guinea
Health	Department of Health
HIC	Torres Strait Cross Border Health Issues Committee

HIV	Human Immunodeficiency Virus
Home Affairs	The Department of Home Affairs
MDR-TB	Multi-Drug Resistant Tuberculosis
MERS-CoV	Middle East respiratory syndrome coronavirus
MRFF	Medical Research Futures Fund
National CD Framework	
	A National Framework for Communicable Disease Control
NAP	National Action Plan for Human Influenza Pandemic
NatHealth Arrangements	
	National Health Emergency Response Arrangements
National CD Plan	
	National Communicable Disease Plan
NCCTRC	National Critical Care and Trauma Response Centre
NDoH	Papua New Guinea National Department of Health
NHMRC	National Health and Medical Research Council
NNDL	National Notifiable Disease List
NNDSS	National Notifiable Diseases Surveillance System
NTAC	National Tuberculosis Advisory Committee
PHEIC	Public Health Emergency of International Concern
PNG	Papua New Guinea
QDoH	Queensland Department of Health
RACGP	Royal Australian College of General Practitioners
Report	Diseases have no Borders: Report on the Inquiry into Health Issues across International Borders
SoNGs	Series of National Guidelines
TB	Tuberculosis
TSPZ	Torres Strait Protected Zone
UCR	Urgent Call for Research

WHO World Health Organization

ATTACHMENT

Attachment A NHMRC policy on the provision of urgent research funding

Introduction

The Australian Government recognises the rapidly increasing cross-continental movements of people and factors leading to increased risk for transmission of infectious disease across international borders.

The inquiry into health issues across international borders conducted by the House of Representatives Standing Committee on Health and Ageing culminated in the Committee's report entitled *Diseases have no Borders* (the Report). The Report is an important document and the Government thanks the Committee and the various stakeholders for their valuable and thoughtful input to the inquiry.

This response addresses the recommendations raised in the Report, and has been coordinated and prepared by the Department of Health, incorporating input from other Australian Government agencies including the Department of Home Affairs, the Department of Foreign Affairs and Trade (DFAT) and the National Health and Medical Research Council (NHMRC).

Recommendations and Responses

Recommendation 1

The relevant government agencies that have a significant role in managing the biosecurity threat develop a coordinated approach which addresses the health threats to Australians and recognises the impact on the economy.

Agree

The Australian Government has a coordinated approach to managing biosecurity issues that pose a health threat to Australians and the Australian economy. This collaborative approach ensures outbreaks are prevented or attenuated, thus minimising their effect on the Australian economy.

The Department of Health (Health) and the Department of Agriculture and Water Resources (Agriculture) have been working together to develop the *Biosecurity Act 2015*. The *Biosecurity Act 2015* received Royal Assent on 16 June 2015 and commenced operation twelve months later on 16 June 2016. The *Biosecurity Act 2015* fully replaces the *Quarantine Act 1908*, and provides a modern, more flexible system for managing human biosecurity risks at the border.

For example, a coordinated approach was taken by the departments of Health, Agriculture, DFAT, and Home Affairs to manage the health and biosecurity risks posed by recent Zika and Ebola events. Both of these events were declared to be a Public Health Emergency of International Concern (PHEIC) by the World Health Organization (WHO).

A collaborative and coordinated approach to biosecurity and health is supported by monitoring and surveillance systems such as Health's National Incident Room, and the National Notifiable Diseases Surveillance System (NNDSS). Government plans and guidelines have also been developed to ensure a coordinated approach to emerging issues. Examples include the Australian Veterinary Emergency Plan (AUSVETPLAN), Emergency Response Plan for Communicable Disease Incidents of National Significance (CDPLAN), and a suite of guidelines. Quarterly meetings between Health, Home Affairs, Agriculture, DFAT and the Attorney-General's Department have been implemented. These meetings support a collaborative process to respond to human biosecurity threats before and at the border.

The Australian Health Protection Principal Committee (AHPPC), a principal committee of the Australian Health Ministers' Advisory Council, facilitates collaboration between the Commonwealth and State and Territory governments to ensure a coordinated national approach to health threats.

Australia's national health sector plan for pandemic influenza, the Australian Health Management Plan for Pandemic Influenza (AHMPPI), has also been reviewed taking into account lessons observed from the 2009 pandemic and international best practice. The AHMPPI sits under Australia's National Health Emergency Response Arrangements, and aligns with the Australian Government Crisis Management Framework. While the AHMPPI is specific for influenza the core framework of the plan is used as a template to guide the response to other communicable disease (CD) outbreaks.

Recommendation 2

The Department of Health and Ageing review the existing evidence base to evaluate the cost-effectiveness of its policy to use heat scanners at ports of entry as a measure to mitigate the risk of infectious disease importation.

Agree

The Australian Government supports this recommendation. Health has reviewed its policy on the use of thermal scanners at points of entry to mitigate the risk of the introduction of influenza. Health has consulted with state and territory health departments, via the Australian Health Ministers' Advisory Council (AHMAC), who have agreed that thermal scanners are not effective or efficient border measures for mitigating the risk of CD threats at points of entry. Other measures, such as preventative actions including public awareness campaigns, have been shown to be more effective and less resource intensive.

Thermal Scanners

Thermal scanners are intended to delay the introduction of CDs. As one of several border measures available under the AHMPPI, thermal scanners can detect travellers with high temperatures. Travellers who are detected are clinically assessed by a nurse to determine if signs and symptoms of influenza are present, and whether further intervention is required.

Review of the use of Thermal Scanners as a Border Measure

During the 2009 influenza (H1N1) pandemic, thermal scanners and health declaration cards were employed as screening measures at Sydney airport. Two Australian reports have examined the use of thermal scanners as a border measure during the pandemic:

- Australian Government's *Review of Australia's Health Sector Response to Pandemic (H1N1) 2009: Lessons Identified*; and
- Australian Government's *Evidence Compendium and Advice on Travel-related Measures for Response to an Influenza Pandemic and Other Communicable Diseases*.

Both reports have identified two main challenges with the deployment of thermal scanners as a border measure, namely effectiveness and efficiency.

At least two studies have also reviewed the border screening measures used during the pandemic:

- Gunaratnam, PJ, Tobin, S, Seale, H, Marich, A, McAnulty, J. (2014) Airport arrivals screening during pandemic (H1N1) 2009 influenza in New South Wales, Australia. *MJA*, 200(5), 290-292.
- Selvey, LA, Antão, C, Hall, R. (2015) Entry Screening for Infectious Diseases in Humans. *Emerging Infectious Diseases*, 21(2), 197-201.

Both studies found that the use of thermal scanners in Australia's response to the pandemic represented a significant opportunity cost, both in terms of financial and public health resources. In New South Wales during the pandemic, of all detected cases of H1N1, 76.3% (425) were detected at emergency departments or general

practices, compared to 0.5% (3) at the airport. This highlights the considerable human resource costs of 24 hour thermal scanner deployment for identification of very few cases.

The WHO's *Global Influenza Preparedness Plan 2005*, which recommends actions for national authorities, recommends that the practice of using thermal scanners should be permitted to promote public confidence. There is some anecdotal evidence that thermal scanners are valuable for raising confidence in the community showing that border measures have been implemented to mitigate the risk of infectious diseases such as pandemic influenza. However, there is no empirical data to support this contention and the diversion of significant public health resources from other response activities outweighs any benefit they may have. In addition, those passing through the scanners may be given false reassurance that they do not have, or are not incubating, an infectious disease if the thermal scanner does not identify them as having a fever.

Current policy

There is currently insufficient evidence to recommend the use of thermal scanners as a border measure. Thermal scanners were not deployed at Australia's points of entry in response to the 2014 outbreak of Ebola, a Public Health Emergency of International Concern, or to the 2015 outbreak of Middle Eastern respiratory syndrome coronavirus (MERS-CoV) in the Republic of Korea.

Recommendation 3

The Australian Department of Health and Ageing work with the states and territories to provide a uniform notifiable diseases list across Australia, with consistent reporting requirements across each state and territory and consistent public health information on infectious diseases disseminated to the public. This should be a priority of the Australian Health Ministers' Advisory Council.

Agree in principle

Health maintains a uniform notifiable disease list across Australia with the National Notifiable Disease List (NNDL). The NNDL is a legislative instrument under the *National Health Security Act 2007*. The diseases on the NNDL are accepted by Commonwealth and state and territory health authorities as diseases that should be reported nationally. The Australian Government Minister for Health may vary the NNDL following consultation with the Australian Government Chief Medical Officer and each state and territory Health Minister.

The *National Health Security Act 2007* is underpinned by the National Health Security Agreement (the Agreement), an agreement between the Australian Government and state and territory governments which aims to strengthen Australia's public health surveillance and reporting system. Under the Agreement, states and territories report consistently on CDs listed on the NNDL that are both nationally notifiable and notifiable within their jurisdiction according to relevant public health legislation. Health receives de-identified notifications from states and territories into the NNDSS on a daily basis. Health works with states and territories, through the Communicable Diseases Network Australia (CDNA) and its sub-committees on consistent reporting requirements to the NNDSS. States and territories may collect more detailed notification data to inform public health management and jurisdictional surveillance priorities.

The public summary data for notifications of CDs reported to the NNDSS is available at www.health.gov.au/nndssdata. Health also produces an annual surveillance report of notifications of CDs reported to the NNDSS which is published in the *Communicable Diseases Intelligence* journal.

A *National Framework for Communicable Disease Control* (the National CD Framework) was developed by the Australian Government in partnership with states and territories through CDNA and the AHPPC and in consultation with key stakeholders. The National CD Framework was endorsed by the Council of Australian Governments (COAG) Health Council in April 2014 and further details are included in the responses to Recommendations 14 and 15. The National CD Framework acknowledges the role of effective communication strategies in CD control. The National CD Framework identifies an opportunity for development of communication guidelines that define Commonwealth and jurisdictional functions and responsibilities including agreed spokespeople and the objectives, actions and target audiences for various stages of a national CD emergency. An Implementation Plan for the National CD Framework is currently under development and will provide specific and measurable activities to address key prioritised outcomes identified in the National CD Framework.

Health collaborates with the AHPPC and its Standing Committees to ensure consistent messages are disseminated to the public in a national CD emergency. Health provides information, including CD fact sheets, for health care professionals, consumers and the general public on its website www.health.gov.au.

Recommendation 4

The Australian Government work with the state and territory governments to assess the viability of providing a centralised refugee and migrant health service in each state and territory, which would automatically refer people who move from immigration detention into the wider Australian community.

Agree in principle

The Australian Government believes that the implementation of this recommendation would greatly assist in the early diagnosis and management of illnesses and conditions that may prevent future costs, impacts on clients and the potential spread of CD. In particular it would encourage a centralised uniform process in each jurisdiction for refugees on arrival and asylum seekers on release into the community.

Health and Home Affairs will communicate the outcomes and recommendations of the Report to state and territory governments through existing communication mechanisms so that jurisdictions can consider the viability of providing a centralised refugee and migrant health service in their state or territory.

Recommendation 5

The Royal Australian College of General Practitioners provide resources and training to general practitioners on the complex health needs of migrants and refugees, with a focus on identifying infectious diseases which are notifiable in Australia, or diseases which are of specific concern to refugee and migrant communities.

Noted

The Royal Australian College of General Practitioners (RACGP) has developed a coordinated approach to the health of migrants and refugees. This includes a range of resources that continue to be better targeted and developed to support general practitioners when dealing with the complex health needs of migrants and refugees.

Training modules on topics such as refugee and migrant health, infectious disease control, and notification requirements for major diseases are embedded into the RACGP curriculum. The RACGP's online learning system also features a specific module on refugee health and will be expanded to include more extensive educational activities on refugee and migrant health and infectious disease control. In addition to this, the RACGP Library Portal has a dedicated subject portal for refugee and migrant health, much of which can be accessed by non-members as well as members. Topics include interpreters, cultural issues, resettlement and physical disease. They can be accessed at <http://www.racgp.org.au/support/library/subject-portals/refugee/>

The RACGP also has a Refugee Health Specific Interest Group Network that supports General Practitioners to provide a coordinated and comprehensive approach to refugee health in primary care. The Refugee Health Specific Interest Group Network provides a network for those working in and/or interested in the field and is a forum for discussion and sharing resources. As part of its commitment to continuing professional development, the Refugee Health Specific Interest Group Network is developing training on migrant and refugee health for GPs. Members of this group also play a lead role in advocacy such as including new data fields in general practice software to support identification and care of migrants and refugees and representing the RACGP on relevant committees.

Furthermore, members of the RACGP Refugee Health Specific Interest Group Network have contributed to the Australasian Society of Infectious Diseases guidelines *Recommendations for Comprehensive Post-Arrival Assessment for people from Refugee-like backgrounds* (2016) which is freely available for download to all health practitioners at: www.asid.net.au/resources/clinical-guidelines

Recommendation 6

The Australian Government, coordinated by the Department of Health and Ageing and in consultation with the wider Australian community, develop a national public awareness campaign to better inform and engage the travelling public about infectious disease issues.

This campaign should cover the risks associated with travelling overseas, preventative measures that can be undertaken to minimise these risks, and screening measures used at the border to prevent the importation of infectious disease.

Subject to consumer input and feedback, this campaign could include a range of materials and platforms, including:

- **videos, which could be published via YouTube, Smartraveller, international flights and/or other relevant access points;**
- **reading material such as brochures which can be provided at travel agencies, passport offices, on international flights and other relevant access points; and**
- **targeted ongoing engagement with consumers via social media and on travel websites.**

Agree in principle

The Australian Government acknowledges that informing and engaging travellers about the risks of infectious disease is an important step in preventing and controlling the importation and spread of disease across international borders. A review of border measures undertaken by Health in August 2013, as part of the evidence based revision process that informed the AHMPPI, found that good communication from government would likely result in greater public resilience and, potentially, improved public participation to support the containment of an outbreak.

The Government provides information on communicable diseases to the public through Health's website (www.health.gov.au). The website is a key communication measure used to relay information on travel health and biosecurity. Health's website is regularly updated to ensure currency of information and to respond quickly to emerging issues through regular situation reports, advice to travellers and medical professionals and links to other websites such as the WHO and DFAT's Smartraveller (through which Health provides regular travel health input). This approach has been successful during a number of emerging issues and outbreaks including the avian influenza A (H7N9) outbreak in China in 2013, the MERS coronavirus outbreak in the Republic of Korea in 2015, the Ebola virus disease outbreak in West Africa from 2013-2016; and, more recently, the cluster of microcephaly cases and other neurological disorders associated with Zika virus in Brazil, the yellow fever outbreak in Angola and the Democratic Republic of Congo and outbreaks of MERS in the Middle East during the Hajj period. Advice on the WHO's declaration of polio as a PHEIC in 2014 was provided through Health's website to ensure that Australian travellers to polio infected countries met with vaccination obligations.

In addition to a prominent web presence, the Australian Government uses targeted communication materials and channels to provide important information to travellers about

specific health risks abroad. This approach ensures that the appropriate information is delivered in the most effective manner at the most effective time.

The measures include:

- Banners, information cards and electronic signage encouraging incoming passengers to self-report prior to, or on arrival if they are feeling unwell.
- Banners, information cards and electronic signage encouraging outgoing passengers on how to protect themselves from CD risks.
- Quarantine inflight announcements.
- The Yellow Fever Action Card developed specifically for travellers who arrive in Australia from affected countries without a valid yellow fever vaccination certificate.
- Printed information about diseases such as Rabies, Ebola and MERS for distribution at points of entry.
- Printed information about disease risks around particular events such as the Olympics, Paralympics and the Hajj for distribution at points of entry, travel agents and other key stakeholders.
- Use of Health's Twitter account to direct travellers to up-to-date information on health risks as they develop. Information broadcast on Health's Twitter account is developed in consultation with the department's Communications Branch.
- Video messages on Health's YouTube Channel on specific health events and directing travellers to Health's website for further information. Video messages are developed in consultation with the department's Communications Branch.
- Development of fact sheets, infographics and frequently asked questions for the website in response to specific health risks such as Zika virus, Ebola, Yellow Fever and MERS.
- Content development of fact sheets on tuberculosis for overseas students for distribution via Home Affairs.
- Information to travel agents and medical professionals.

DFAT also runs the Smartraveller national public information campaign to encourage travellers to be informed and prepared before overseas travel. This includes information on health risks. Materials are translated for Australians of multi-cultural backgrounds. Smartraveller also uses social media, such as Facebook and Twitter, to rapidly convey important information and direct travellers to the Smartraveller website for more detail.

Recommendation 7

Having regard to the terms of the Torres Strait Treaty, the Department of Health and Ageing, Queensland Health, AusAID and the Papua New Guinea Government:

- **establish a set of protocols and procedures for the identification and treatment of tuberculosis and other infectious diseases in Papua New Guinea and the Torres Strait Islands; and**
- **consider what clinical services should be available in both Papua New Guinea and Australia for the identification and treatment of tuberculosis and other infectious diseases.**

Agree in principle

In Australia, tuberculosis (TB) control is managed, operationally, through state and territory-based programs, rather than a national program. In the Torres Strait, decisions regarding appropriate protocols, procedures and clinical services for the identification and treatment of TB and other infectious diseases are a matter for the Queensland Department of Health (QDoH). In PNG, the agency responsible for the identification and treatment of TB and other infectious diseases is the PNG National Department of Health (NDoH).

The Australian Government is engaged in a range of activities that support QDoH and PNG NDoH in TB management and control, as follows.

Torres Strait Cross Border Health Issues Committee

The Torres Strait Cross Border Health Issues Committee (HIC), established in 2003, includes representatives from Australian and PNG national, state and provincial governments, and traditional inhabitants from the Torres Strait and the adjacent PNG Treaty villages. The HIC identifies health concerns that arise in the TSPZ and adjacent Treaty villages along the South Fly coast of PNG, and works with member agencies to identify appropriate strategies and resources to address these concerns.

In this regard, the HIC has established a Clinical Collaboration Group to provide a forum for ongoing communication and collaboration between PNG and Australian clinicians on clinical management and effective TB program delivery in accordance with international standards of care. Membership includes the Australian Government Chief Medical Officer, the Queensland Chief Health Officer and Australian and PNG TB clinicians. The Clinical Collaboration Group has developed a Clinical Communication Protocol relating to cross-border health care and the transfer of patient care for PNG nationals presenting to, or being treated in, Queensland health care facilities.

National Tuberculosis Advisory Committee

At the national level in Australia, the National Tuberculosis Advisory Committee (NTAC) provides expert advice to CDNA, the Australian Government Department of Health and the states and territories, on the prevention and control of TB. The activities of NTAC ensure that Australia maintains a high level of TB-related knowledge and expertise, and ensures that there is continued vigilance and action on TB control in Australia and the surrounding region. NTAC, through the publication of guidelines and position statements, provides national advice on TB control to the Australian Government, state and territory governments and the broader TB healthcare community.

Australian Government funding to Queensland

The QDoH and NDoH work together to strengthen capacity in the Torres Strait to identify and manage CD risks. The *Torres Strait Health Protection Strategy* includes funding from the Australian Government to Queensland for:

- additional staff at Saibai Island to support the provision of primary health care, including to identify and treat infectious diseases;
- construction of an enhanced primary health care clinic and staff accommodation on Saibai Island, completed in November 2013;
- an exotic mosquito detection, control and elimination program to assist in preventing the spread of mosquito-borne diseases such as dengue fever in the Torres Strait and to the mainland; and
- an officer to contribute to CDs information and data sharing between PNG and the Torres Strait.

Australian Government funding to PNG

Australia, through DFAT, supports the Government of PNG's (GoPNG) goal to significantly reduce morbidity and mortality from TB, including multi-drug resistant TB (MDR-TB). Australian support has been designed in consultation with the NDoH, Provincial governments, and with oversight from the WHO. The program is also informed by extensive external and independent assessments, including capacity diagnostics of health systems, epidemiological studies, and program reviews.

Both governments have agreed that the best approach is to build a sustainable, effective health system in PNG that has the capacity to treat TB. Our approach recognises that Western Province has very high rates of TB, and the highest number of MDR-TB cases, but also that TB is spread across PNG, with National Capital District (which includes Port Moresby and is a transport hub) accounting for 25 per cent of cases, despite having only 5 per cent of the population. It is also critical to ensure that national-level responsibilities (such as setting standards and policies, and training health workers) are met so that services can be provided where they are needed.

Australia has committed \$60 million for TB control initiatives in PNG from 2011-17, including \$44.7 million for Western Province (2011-17), and \$15.3 million for National Capital District and the national response (2015-2017). The package aims to strengthen many components of the response through community engagement programs, workforce improvements, technical assistance, infrastructure, and laboratory and supply chain assistance.

In Western Province, Australia is working on the TB response with a number of partners including Australian aid contractor Abt-JTA, the Burnet Institute, and World Vision. Australia's program has supported improvements across the spectrum of diagnosis, treatment and control including:

- training health workers and community treatment supporters to supervise WHO's Directly Observed Treatment Short Course (DOTS) treatment standard;
- key health workforce positions including TB medical officers, coordinators and physicians;
- technical expertise to support the standards and procedures for addressing drug-resistant (DR)-TB for the Western Province TB Program;

- construction of a purpose built 22 bed TB ward at Daru General Hospital;
- an initial procurement of TB and DR-TB medicines; and
- procurement of diagnostic medical equipment including GeneXpert to detect DR-TB.

This direct support to Western Province is complemented by work to improve TB management in PNG more broadly including:

- through a partnership with WHO, a TB Medical Officer and an international DR-TB specialist to provide technical support to the NDoH;
- providing an adviser to the Central Public Health Laboratory to strengthen national and provincial laboratory capacity;
- support for a national survey of TB drug resistance;
- core funding to the Global Fund for Aids, TB and Malaria which funds TB programs in PNG.

As part of Australia's new \$300 million Indo-Pacific Health Security Initiative, DFAT is in the process of scoping new investments at country and regional level to help prevent, detect and respond to infectious disease outbreaks, including drug-resistant forms of TB. PNG is a priority country under this Initiative. In April 2018 a scoping team visited PNG to consult with the Government and partners to identify potential partnerships and capacity building activities in PNG.

Australia also works with GoPNG to strengthen health systems more generally, to improve health financing, workforce, and governance. We continue to advocate for GoPNG to secure sufficient resources for TB and for PNG health systems more broadly.

The WHO has undertaken three recent reviews of the management of TB in PNG's Western Province (October 2011, November 2012, and February 2014) and has generally endorsed the approach to TB control being taken in PNG.

The WHO's panel of experts in DR-TB [the regional Green Light Committee (rGLC)] reviewed TB programs in the National Capital District, Gulf Province and Western Province in May 2015 and August 2016. Major improvements have been noted, including the implementation of a widespread community-based DOTS treatment program in Daru, planning for a program of active case finding in Western Province, and the inauguration of a National Reference Laboratory.

The WHO and rGLC have also noted significant ongoing challenges, including that MDR-TB strains are becoming more common with high case numbers reported from the National Capital District and Western Province, and that models of care for TB and DR-TB need to be strengthened to accelerate the response. Australia will continue to work with GoPNG to address these challenges and improve the management and control of TB in PNG.

Recommendation 8

The National Health and Medical Research Council, in conjunction with key stakeholders, work collaboratively to provide more support for initiatives to increase international infectious disease research collaborations and build research capacity, particularly with neighbouring countries in Asia-Pacific region.

Noted

The NHMRC is the Australian Government's main health and medical research funding body. The NHMRC, under the provisions of the *National Health and Medical Research Council Act 1992*, has specific requirements for its research funding, which is provided on a competitive basis subsequent to receiving applications in defined periods each year, for defined categories of grants and awards.

Whilst the majority of research supported by the NHMRC is investigator initiated (i.e. the research is conceived and developed independently by the research investigator) the *National Health and Medical Research Council Corporate Plan 2015-16* recognises 'preparing for rapid and unpredictable change' as a major health issue over the coming trienniums.

Since 2015, the NHMRC provided approximately \$266 million in funding to infectious and parasitic disease research.

In 2015, NHMRC identified that research undertaken by a special Centre of Research Excellence (CRE) could provide the foundations for an ongoing, coordinated national effort against emerging infectious diseases. The NHMRC included an additional stream in its second round of Centres of Research Excellence for funding in 2016 of a CRE in Infectious Disease Emergency Response Research.

The work on research for public health action was identified in the National CD Framework and has led to a number of initiatives. The establishment of the CRE in Infectious Disease Emergency Response Research, with almost \$5 million in funding, was announced in July 2016 and it is a joint venture between the University of Melbourne and the Royal Melbourne Hospital. The centre establishes the Australian Partnership for Preparedness Research on Infectious Disease Emergencies (APPRISE), a national network of leading Australian researchers to deliver a coordinated and evidence-based response to infectious diseases. APPRISE focuses on improving Australia's ability to provide a sound evidence base to assist decision makers during a CD emergency.

The NHMRC also engages in collaborations with other key international and national bodies to provide evidence based advice on emerging infectious diseases. The NHMRC has facilitated Australian participation in international infectious disease research collaborations, with a focus on the Asia Pacific region (Section 1 of [Attachment A](#)).

In the 2015-16 Budget, the Australian Government allocated \$6.8 million to the NHMRC for the Northern Australia Tropical Disease Collaborative Research Program. This program is part of the Government's *White Paper on Developing Northern Australia* and focuses on communicable disease issues of importance to the north of Australia and vulnerable priority populations there. The program also provides support for the CRE for Emerging Infectious Diseases, consisting of an innovative high quality team to undertaking research into the

prevention, diagnosis, and treatment of tropical disease that will translate research findings into outcomes for health in Australia and the region. Strong links have been developed with the research community who have provided regular updates to key committees including AHPPC and CDNA, with the APPRISE group reporting their workplan to AHPPC.

The delivery of the Tropical Disease Collaborative Research Program has been undertaken collaboratively with DFAT's Tropical Disease Research Regional Collaboration Initiative that aims to strengthen research collaboration between Australian, regional and international research institutions on tropical diseases which pose a trans-boundary threat in Australia's region.

While the CRE's are investigator-led research groups, the Medical Research Future Fund (MRFF) supports priority-driven research. The MRFF has been established as an endowment fund to provide a sustainable source of funding for vital medical research over the medium to longer term. The MRFF represents a doubling in the Australian Government's commitment to health and medical research, with \$1.4 billion expected to be available for disbursement in the first five years (beginning 2016-17).

The *Australian Medical Research and Innovation Strategy 2016-2021* and the *Australian Medical Research and Innovation Priorities 2016-2018* have been used by Government to guide investments from the MRFF in health and medical research. International collaborative research, Antimicrobial Resistance and Communicable Disease Control have all been identified by the Australian Medical Research Advisory Board as areas of priority for MRFF funding.

As part of the 2017-18 Budget, the Government announced the 2016-17 MRFF package totalling \$65.9 million, including \$5.9 million for research into Antimicrobial Resistance. This funding has been used to run, through the NHMRC, a Targeted Call for Research into AMR transmission and stewardship in residential aged care facilities. The successful grant recipients have now been finalised with two of the successful projects announced on 16 February 2018 – both projects are focused on determining the transmission of resistant microbes to, from and within residential aged care facilities. This research will be used to inform future prevention strategies.

Recommendation 9

The Australian Government test Australia’s ability to respond to a widespread outbreak of infectious disease other than influenza, by undertaking a pandemic exercise across the relevant Commonwealth, state and territory government agencies.

Noted

Exercises with a health focus or a health component are conducted across relevant Commonwealth and state and territory agencies on a regular basis. These include communicable disease and foodborne disease exercises.

Health emergency response exercises have been reintroduced to AHPPC meetings and Health periodically exercises pandemic issues with CDNA at its face to face meetings.

Health also conducts regular internal health emergency response exercises.

All exercises, for influenza, other communicable diseases, or other health incidents, involve the practising of principles of response under the Australian Government Crisis Management Framework (AGCMF): who is in charge; roles and responsibilities; what plans are relevant; and how and what communications will occur.

In the case of influenza, exercises also ensure that the AHMPPI continues to link decision makers with the best available evidence.

In February 2018, the recently formed Home Affairs portfolio conducted an influenza pandemic exercise. Participants were involved from across Commonwealth government agencies, including Health, to test existing frameworks and processes and identify opportunities to strengthen our pandemic preparedness.

Recent communicable disease outbreaks overseas, including the Ebola outbreak in West Africa, MERS in the Middle East and the Republic of Korea, and global Zika virus transmission has provided an opportunity for a real-life test of the Australian Government’s ability to respond to international infectious disease threats and to test response plans. The rise in meningococcal W cases in Australia between 2014 and 2016 enabled the Commonwealth and state and territory health departments to test the Emergency Response Plan for Communicable Disease Incidents of National Significance (CDPLAN). Learnings from these recent response activities have and will continue to inform future response protocols and relationships between Commonwealth and state government agencies.

In 2016, Health completed a draft revision of the whole of government pandemic response plan. The draft National CD Plan was based on the learnings from an exercise held in late 2014, involving representatives from the Australian Local Government Association, seven states and territories and ten Australian Government agencies, to discuss the review of the National Action Plan for Human Influenza Pandemic (NAP).

The National CD Plan is a high level plan identifying governance and communications coordination mechanisms, roles and responsibilities. It is based on AGCMF arrangements, however provides greater clarity regarding how these arrangements would operate within the context of a communicable disease response. The plan assists non-health agencies to anticipate the activities of the health sector and clarifies the expectations of non-health agencies in supporting the health response and maintaining essential services. The National CD Plan will replace the NAP.

The revised Plan was endorsed by AHPPC in May 2017, and received final endorsement by AHMAC and the Australia-New Zealand Emergency Management Committee in October 2017.

Recommendation 10

The Australian Government, in consultation with consumers and other relevant federal, state and territory agencies, develop a national communication strategy for consumers to be used in the event of an infectious disease outbreak.

Noted

Effective communication is essential to achieve an efficient response to any health emergency. These arrangements are in place through the AHMPPI.

During any health emergency the media unit in the Office of Health Protection within Health liaises closely with other agencies, its partners in state and territory jurisdictions and with relevant medical and consumer organisations through the National Health Emergency Media Response Network. These agencies collaboratively develop consistent health emergency messaging and distribute up-to-date information on the particular health emergency, including situation reports, numbers of cases, common talking points and campaign materials.

The National Framework for Communicable Disease Control (National CD Framework) (referred to in more detail in recommendations 14 and 15) identifies that CD communications can be improved by developing all hazard health sector communication guidelines that identify Commonwealth and jurisdictional functions and responsibilities, including agreed spokespeople and the objectives, actions and target audiences for various stages of a national CD emergency. Work is underway to agree on priority implementation activities under the National CD Framework.

A health communication strategy that includes effective outbreak communication will be developed under the National CD Framework.

Public health communications are explicitly addressed in the National CD Plan, which describes roles and responsibilities for communications during a communicable disease outbreak. This includes communications across government, within the health sector, with the public and required media coordination.

Communication is also highlighted in the AHMPPI which contains specific guidance on the coordination and conduct of national communications during a pandemic. The Multijurisdictional Outbreak Investigation Plan for Food Borne Diseases has a nationally agreed communication protocol to ensure communication and advice is coordinated across the health and food agencies to ensure effective public health action.

Recommendation 11

The Australian Department of Health and Ageing consult with members of the general public or representatives of health consumers in the pandemic planning process, including in pandemic exercises designed to test the ability of government to respond to a pandemic event. Consumer involvement should include testing the ability of any communication strategy designed to inform and engage consumers about a pandemic event.

Noted

Consumers will be consulted on a communications strategy to be developed under the National CD Framework.

Recommendation 12

The Commonwealth Government support the growth of vaccine development and production capacity for vaccines in Australia, to enhance Australia's preparedness to respond to outbreaks of infectious disease in Australia, and in particular, pandemic influenza.

Noted

Following a competitive tender process, Seqirus Pty Ltd was contracted on 29 June 2015 to provide a timely and assured supply of pandemic influenza vaccine (including both candidate (pre-pandemic) and pandemic specific vaccines) to Australia. This contractual arrangement provides capability funding to ensure Seqirus maintains onshore vaccine manufacturing capability that can be mobilised in the event of a pandemic. The 2017-18 Budget Measure *Ensuring the supply of antivenoms, Q Fever and pandemic influenza vaccines* (the Measure), provided funding to extend the current supply arrangements to secure Australia's access to pandemic influenza vaccine for up to six years.

The Measure also provided funds to support a broad, forward looking project to scope pandemic vaccine manufacturing and supply options to ensure sustainable access into the future and value for money. This project will examine a range of potential manufacturing and supply arrangements including, but not limited to, alternative technologies; infrastructure requirements; onshore and offshore capacity and capabilities; and options around different types of contractual arrangements such as public-private partnerships. Seqirus is a significant stakeholder in this project. The outcomes of this project will form a report back to government in the 2019-20 Budget cycle.

Influenza vaccines are one of the most effective ways to protect people from contracting illness during influenza epidemics and pandemics. Australia has onshore capacity to develop and produce influenza vaccines which ensures more timely access to vaccines when global borders may close.

Recommendation 13

The Australian Government coordinate the development of a highly skilled workforce which can respond effectively to a sustained pandemic in Australia.

Noted

The Australian Government has a range of programs that are designed to improve the capacity, quality and mix of the health workforce to meet current and future Australian health service requirements. The programs support Australian health workforce training, registration, accreditation and distribution strategies.

Health workforce policy and planning is undertaken in partnership with professional bodies, education providers, employers and state and territory governments. Health workforce issues are on the agenda of the COAG through the Australian Health Workforce Ministerial Council, where the Australian Government works with states and territories on key strategies to shape Australia's future health workforce.

Health has a Memorandum of Understanding with the National Centre for Epidemiology and Population Health at the Australian National University to develop epidemiologists and provides placements for Master of Philosophy (Applied Epidemiology) scholars.

Health has an agreement with the National Critical Care and Trauma Centre (NCCTRC) in Darwin to develop and maintain a self-sufficient medical emergency workforce. The Australian Medical Assistance Teams (AUSMATs) are a national capability made up of highly skilled health professionals from states and territories which remains ready to respond in emergencies, either domestically or internationally, as appropriate.

On 7 October 2016, the AUSMAT was verified as meeting the WHO international standards for Emergency Medical Teams (EMT) teams, and is one of only a few WHO globally verified teams in the world. It is now accredited as an EMT Type 2, which has the capacity to provide treatment for 20 inpatients (including surgical treatment) and up to 100 outpatients per day.

To manage the strain on the health sector, the Australian Government maintains a national health sector plan to prepare for and respond to an influenza pandemic. States and territories have also developed consistent and comprehensive operational plans for public health and health service responses to influenza pandemic. Other health sector stakeholders are responsible for developing their own pandemic plans and for incorporating pandemic influenza into overall business continuity plans.

In addition to these plans, the National CD Framework (referred to in more detail in recommendations 14 and 15) identifies that a highly skilled and diverse workforce is essential for CD control, prevention and response. The National CD Framework proposes directions for change to achieve a flexible well trained workforce with clear roles and responsibilities. Specific and measurable activities to achieve the proposed changes will be addressed and identified in an implementation plan that is under development.

Recommendation 14

The Australian Government, in consultation with state and territory governments, conduct a comprehensive national audit and mapping exercise to:

- **identify all of the agencies (not limited to those within the health portfolio) and expert committees/working groups involved in managing infectious disease risks;**
- **clarify roles; responsibilities and map hierarchies and lines of communication;**
- **identify all relevant infectious disease policies and plans, explain how these operate in relation to one another;**
- **identify any duplication and present options for streamlining; and**
- **identify and policy or response gaps that need to be addressed.**

The outcomes of the audit and mapping exercise should be made publically available.

Noted

Australia has a robust and comprehensive public health system which regularly monitors CD trends and manages the treatment of affected individuals. When CD outbreaks arise they are managed using state and territory health sector emergency and CD plans.

When incidents of national significance arise, and coordination of state, territory and Australian Government health sector activities is required, this operates according to the National Health Emergency Response Arrangements (NatHealth Arrangements). Additional support for the coordination of major CD emergencies is detailed in the NatHealth Arrangements sub-plan – the CDPLAN.

Additionally, the National CD Framework was endorsed by the COAG Health Council in April 2014. Development of the framework was informed by the *System Overview of Communicable Disease Control in Australia 2012* (Comprehensive Overview), which examined (then) current CDs management in Australia.

This Comprehensive Overview found that overall Australia had a solid foundation of medical and scientific expertise in several disease areas, world leading prevention programs such as the national immunisation program and a sound history of cooperation between the Australian Government and state and territory governments. State and territory governments respond effectively to disease threats in their jurisdictions, enabled by legislation, as well as good partnerships with each other, professional networks, the healthcare sector and the population.

The Comprehensive Overview was used to inform the development of the discussion paper *Towards a National Communicable Disease Control Framework* (the Discussion Paper) which set the strategic context by describing current challenges in CD control and roles and responsibilities in the Australian context. Feedback on the Discussion Paper was sought from a large number of key stakeholders (the consultation outcomes are described in Recommendation 15).

The Comprehensive Overview, the Discussion Paper and the consultation feedback were used in the development of the National CD Framework. An Implementation

Plan for the National CD Framework is currently under development and will provide specific and measurable activities to address the key outcomes that were identified by the National CD Framework.

The Comprehensive Overview, the Discussion Paper and the National CD Framework are publicly available at

<http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-nat-frame-communic-disease-control.htm#toc09>

Recommendation 15

The Australian Government, in consultation with state and territory governments, commission an independent review to assess the case for establishing a national centre for communicable disease control in Australia.

The review should outline the role of a national centre and how it might be structured to build on and enhance existing systems. It should examine different models, considering a range of options for location, governance and staffing. The review should incorporate a cost-benefit analysis for each of the models presented.

The outcomes of the review should be made publically available.

Not agreed

A consultation process with 85 key stakeholders identified a national framework as the best option, rather than a national centre for CD control, as it can deliver a more integrated response without changing the responsibilities of government (both federal and state and territory). The National CD Framework involves a commitment for all parties to work together more collaboratively in the coordination of public health functions and services of CD control. In addition, it identifies directions for change and opportunities for action to strengthen the system within existing arrangements.

The National CD Framework, endorsed by AHMAC in April 2014, acknowledges that a more coordinated, strategic approach is increasingly important to maintain and improve CD control and that a national approach in certain areas can be a more effective and efficient use of resources. The National CD Framework:

- brings together government, agencies and committees under the goal of strengthening our defenses against CDs;
- recommends outcomes required to achieve the two key objectives:
 - improved prevention, detection and response; and
 - improved organisation and delivery of CD control; and
- in doing so, supports the delivery of an integrated, national CD response.

National agreement on the objectives identified in the National CD Framework and priority areas of work has the potential to improve the cost effectiveness of public health practice and programs. A cost analysis on specific activities will be considered when developing the Implementation Plan for the National CD Framework.

In November 2015 AHPPC, in considering key priorities for implementation of the National CD Framework, recommended three priority areas:

- better surveillance and laboratories;
- information systems and research; and
- strengthen leadership and governance.

AHPPC endorsed key implementation activities under these three priority areas and funding is currently being sought through relevant government processes.

Some gaps identified by the National CD Framework have been addressed by associated activities. In 2016 a national laboratory scoping study was completed and evaluated by the Public Health Laboratories Network. A project commenced in 2017 to examine the integration and evaluation of specialised genomics through the national collection of two priority disease areas, meningococcal disease and foodborne disease. This work will include recommendations for a national road map for the integration of microbial genomics into public health.

A significant amount of work has been progressed using the National CD Framework's systematic approach in the area of antimicrobial resistance (AMR). There is a national 'One Health' approach to this issue with strong partnerships with Agriculture and the animal health community. Activities under this approach include the establishment of a national surveillance system to collect and analyse information on AMR and antibiotic prescribing in Australia, the establishment of a national 'One Health' expert advisory group, and collaborative work with states and territories to ensure coordinated responses to outbreaks of multidrug resistant infections. This work supports the National AMR Strategy 2015-2019 and the 2016 AMR Implementation Plan. Research has also been a strong focus in this area with additional NHMRC and MRFF funding announced in August 2017 to facilitate addressing this national and global problem.

The Australian Government does not believe that an additional independent review is required as the National CD Framework was developed in partnership with states and territories and includes information obtained from extensive communication and consultation with key stakeholders, and comprehensive reviews and discussion papers.

Attachment A

1. International Collaborations

The NHMRC works with both national and international stakeholders including government departments and non-government funders of research. Examples of international collaborations in the area of emerging infectious diseases include collaborations with the Singaporean Agency for Science, Technology and Research (A*STAR) and the Health Research Council of New Zealand. NHMRC participates in the Global Research Collaboration for Infectious Disease Preparedness (GloPID-R) in partnership with the European Commission to improve the global research response to a potential outbreak of a new or re-emerging infectious disease threats.

a. Singapore (A * STAR)

NHMRC has an active agreement with Singapore's Agency for Science, Technology and Research (A*STAR) for the cooperative support of health and medical research. Signed in 2011 and renewed in 2014, the agreement aims to promote and encourage research and development activities amongst health and medical researchers from Singapore and Australia, and to assist in establishing collaborations between researchers.

In February 2012, a Joint Symposium hosted in Singapore gave researchers the opportunity to discuss regional issues and scientific trends in emerging infectious diseases, especially in tuberculosis and influenza, and to provide a platform to forge potential research collaborations.

In 2013, joint funding of AU\$3.5 million (SGD\$4.5 million) was awarded by A*STAR and NHMRC to support five research teams based in Australia and Singapore working on research projects using integrative technologies, including bioinformatics, genomics (computational genomics, evolutionary genomics, and functional genomics) and proteomics, to combat emerging infectious disease. Participating Singaporean research institutions include the National University of Singapore, A*STAR's Bioinformatics Institute, the Genome Institute of Singapore and the Singapore Immunology Network.

b. Rheumatic fever vaccine research

NHMRC in conjunction with the Health Research Council of New Zealand is overseeing a Trans-Tasman initiative to fund proof of concept research to identify a group A streptococcal (GAS) vaccine to prevent rheumatic fever – a NZ \$3 million, two year initiative.

The initiative, supporting collaboration between leading researchers in Australia and New Zealand, will demonstrate whether three potential vaccines under development are effective against relevant strains of GAS which causes rheumatic fever in Australian, New Zealand and Pacific Islander Indigenous populations. The study will help inform whether clinical development is feasible from an investment, ethical and regulatory perspective. Rheumatic fever is a significant issue for Indigenous people in both countries. Australia's Aboriginal population experience the highest documented rate of GAS internationally. Similarly, New Zealand's Maori and Pacific Islander populations also have high streptococcal disease burden. One of the critical impacts of

GAS disease for affected Indigenous peoples is its contribution to their shorter lifespan.

The outcomes from this initiative have the potential to benefit communities in the Pacific region, but could also benefit affected communities globally. The estimated global prevalence of GAS disease is approximately 18.1 million existing cases. Of these Rheumatic Heart Disease results in around 233,000 deaths each year.¹

c. Global Research Collaboration for Infectious Disease Preparedness (GloPID-R)

NHMRC is a member of GloPID-R which is a global collaboration of funding organisations with links to the scientific community, to relevant (pharmaceutical, diagnostics, vaccine and biotech) industries, to patient groups and to public health actors including veterinary services. The goal of GloPID-R is to mount an effective research response within 48 hours of a significant outbreak of a new or re-emerging infectious disease with pandemic potential. To achieve this goal GloPID-R brings together funding bodies investing in research to ensure that research capacity and capabilities are in place to support the conduct of scientific research. GloPID-R represents a network of 23 funding organizations and WHO is engaged as an observer organization.

Recent activities include the development of a “*Response Plan*”, a report on “*Connecting and Mapping: Exploring the capacities, capabilities, and barriers to a rapid response to outbreaks among funders and research networks*” and a system for data sharing in public health emergencies. A recent correspondence in *The Lancet*² describes how GloPID-R's members are working to improve the coordination of global research efforts in public health emergencies.

2. NHMRC Urgent Calls for Research (UCR)- Influenza

To date the NHMRC has conducted two UCRs in response to influenza outbreaks, the first in 2005 and the second in 2009.

2005: Potential Avian Influenza-Induced Pandemic Urgent Call for Research

- In late 2005, the NHMRC announced a UCR for a Potential Avian Influenza-Induced Pandemic.
- The aim of the UCR was to support research to rapidly inform and advance Australian strategies to prevent, prepare for and respond to a potential avian influenza-induced pandemic.

On 20 February 2006, 33 successful grants were announced with funding of \$6.5 million.

- The broad domains of research included:
 - Detection and identification of the virus

¹ Carapetis, JR, Steer, AC, Mulholland, EK, Weber, M. (2005) The global burden of group A streptococcal diseases. *The Lancet-Infectious Diseases*, 5(11), 685-694.

² The Lancet Volume 387, No. 10034, p2197–2198, 28 May 2016

- Vaccine development and evaluation
- Anti-viral medication use and effectiveness
- Public health interventions
- Understanding behaviour responses
- Other research of direct relevance to the national response to the risk of an avian influenza induced pandemic.
- Preference was given to proposals which offered the ‘maximum impact in the shortest possible time’.

2009: NHMRC Call for Urgent Research into H1N1 Influenza

- The aim of the UCR was to support research which will rapidly inform and advance Australian strategies to prevent, prepare for and respond to a potential H1N1 Influenza pandemic and inform the development of public policy.
- On 8 July 2009, NHMRC announced funding of up to \$7m for 41 research grants.
- Research supported by the UCR included:
 - understanding why some people get more severe flu than others;
 - strategies for containment in rural, remote and Indigenous communities
 - improving the detection of swine flu;
 - the best strategies for use of anti-viral medications;
 - the prospects of swine flu interacting with other flu strains; and
 - risks to children in hospitals.