

The time has come for an Australian Centre for Disease Control

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Australia is now unique in being the only Organisation for Economic Co-operation and Development country without a recognised separate authority for national scientific leadership in communicable disease control. Different nations have different models to deliver this function, but all are composed of professionals with a degree of independence from government, to ensure that there is a clear separation between politically sensitive decision making, and the advice and tools needed to inform best practice from a technical perspective.

The world's best-known example, the United States Centers for Disease Control and Prevention (USCDC), which was

established over 60 years ago, is now a recognised national and international leader in many areas of health. With its budget in the billions of dollars, the USCDC has made enormous contributions to health policy development, program implementation, the advance of basic public health knowledge, and workforce development.^{1,2} However, it is not the only model for such an enterprise.

In 2002, partly as a response to the emerging threat of bioterrorism, but also in recognition of the growing complexity of communicable disease control, surveillance and response, the United Kingdom established the Health Protection Agency as an

independent statutory authority. The Health Protection Agency built on a long-standing tradition of national technical leadership in disease control.³ It was designed to strengthen national surveillance systems and response capability, improve the integration of all aspects of health protection, and provide formal support for the field work carried out by their local public health officials.⁴ The recently announced plan to move the agency into the Department of Health was met with publically expressed concerns from several professional bodies and public health experts about the effect of the loss of independence from government on public and health professional confidence, as well as concerns for the retention of expertise and emergency response capability.⁵⁻⁸

Given Australia's federal governance structure, perhaps the most pertinent example in terms of comparable legislative frameworks is Canada's Public Health Agency. It was established in the aftermath of the severe acute respiratory syndrome (SARS) outbreak. The enquiry into Canada's management of SARS⁹ reflected on the absence of national health goals and strategies and the difficulties faced by public health professionals in trying to provide evidence-based advice on disease control from within large, process-oriented health bureaucracies that were focussed on routine administration, while being geared to the political issues of the day. The enquiry found that, despite the presence of good public health response capabilities within provincial governments, the technical functions of health protection should take place within an 'arm's length' agency to enhance the credibility and independence of public health activities.⁹ As a result of the enquiry, the Government of Canada created the new Canadian Agency for Public Health, led by the Chief Public Health Officer of Canada.⁹

Another example with relevance for Australia is the European Centre for Disease Prevention and Control, which was established in May 2005 in response to the recognition of new emerging diseases such as SARS and avian influenza and to strengthen Europe's defences against infectious diseases.¹⁰ Although formally supranational, the Centre has functions that reflect the European Union's evolution toward federal approaches, particularly in the technical area. An external evaluation in 2008 emphasised the importance of its role as an independent centre of scientific excellence in disease control.¹¹ The model of a Centre for Disease Control at arm's length from the political process was evaluated positively in the report.

Clearly, other developed countries recognise independent technical agencies for communicable disease control as best practice. Why then has Australia not considered such an agency?

In fact, the call for an Australian Centre for Disease Control (CDC) has been a longstanding one.¹² Rubin *et al.* pointed out the benefits of local communicable disease coordination along with dedicated training for public health disease control, based on the US CDC training program, when Public Health Units were established in New South Wales in 1990.^{2,13} More recently, there have been several public expressions of concern about the risks Australia faces in the absence of an independent expert agency for disease control.¹⁴⁻¹⁷

Renewed advocacy for an Australian CDC has been driven by critical reflection on recent national disease control incidents.^{14,18} Perhaps the most notable catalyst has been the 2009 H1N1 influenza A pandemic. Although it was far from

catastrophic, and turned out to involve a strain that was well below the initially feared pathogenicity, the pandemic clearly pushed our resources and expertise to the limit of their capacity under current arrangements.¹⁸ There were extreme demands on State and Territory public health workforces that could not have been met if the epidemic had been more severe or extensive.¹⁹ Jurisdictional representatives on the current national technical leadership group, the Communicable Diseases Network Australia (CDNA), were required to develop technical expert advice at the same time as leading the response in their own States and Territories. An Australian CDC would provide a source of technical leadership and coordination, including the proficient communication of technical information and direction to the public and healthcare providers. It would also assist in the provision of surge capacity to the public health and other workforces.

Another incident that highlighted the need for independent, expert-led investigation of an emerging health issue was the identification in April 2010 of febrile convulsions in young children following administration of seasonal influenza vaccine.²⁰ The controversy surrounding the potential role of the vaccine and the timeliness of the risk detection led to the Horvath Report, which noted the need for better surveillance of adverse events following immunisation, and a new governance framework for Vaccine Safety.²¹ Such functions would fit well within an Australian CDC, which would direct the optimal allocation of scarce resources to carry out efficient public health investigations with timely reports to Government, health services and the community.

Zoonotic infections can present particular challenges because of the need to coordinate expert advice across both human and animal health sectors. The 2011 outbreak of Hendra virus affected horses in a relatively small number of widely dispersed locations across Queensland and New South Wales, with the potential to cause human disease and fatalities. Again, local responses were strong but stretched, requiring extensive responses from state-level human and animal health agencies, working with the Commonwealth Scientific and Industrial Research Organisation's Australian Animal Health Laboratory in Geelong. A national agency would have been beneficial to provide overall leadership and coordination, efficient allocation of resources and prioritisation of national research efforts.

In Australia today there is no national strategic communicable diseases plan with any funding base or an agency responsible for the delivery of coordinated programs and increasing national capacity for communicable disease control. Currently the Australian Health Protection Principal Committee is chaired and supported by the Department of Health and Ageing, and in conjunction with its subcommittee the CDNA it manages the national communicable disease agenda. This structure brings together members with considerable and diverse expertise, but a wide range of competing priorities, primarily in program management. It has very limited scope for ongoing analysis and interpretation of national data, development of new surveillance methods, routine review of international findings, evaluation of policy and program impact, and the training and mentoring of the public health workforce that must be kept in readiness for the communicable disease threats that may emerge in a decade or week's time. An Australian CDC, as a central core of technical

leadership, would coordinate and provide these functions, and offer the Australian Health Protection Principal Committee and the CDNA the ongoing support required for them to perform their key roles in communicable disease control.

It is important to understand that an Australian CDC would not replace CDNA. CDNA would continue to bring together agencies with disease control responsibilities from all jurisdictions in Australia's federal structure. And its members, with their wealth of experience in public health, must continue to contribute to the national agenda but can no longer be expected to be its mainstay.

Despite its undoubted contribution over more than two decades to communicable disease control, CDNA's structure does not allow it to provide needed national leadership in several key areas. A prime example is the ongoing threat of increased antibiotic resistance, an area in which major gaps in response remain, 10 years after a national review made recommendations about how they should be addressed.²² The problem is well recognised by specialist physicians who manage infectious diseases, who have recently called for an Australian CDC as the way forward.¹⁶

The training and mentoring role of a national communicable disease control agency is central to its mission. Programs funded at the national and state level to support workforce development in the control of communicable disease have recently been cut back or closed.¹⁷ The potential workforce gaps ensuing from discontinued training programs threaten outbreak response surge capacity in the short term, and will inevitably lead to real communicable disease control workforce shortages in the longer term. An Australian CDC would provide a natural focal point for workforce development in the specialised area of disease control.

One of the major objections, often implied rather than stated explicitly, is that the establishment of an Australian CDC is unaffordable, and this concern will be heightened in the current era of fiscal tightening. Certainly an endeavour on the (gross domestic product-adjusted) scale of the USCDC would be out of the question, but it would also be unnecessary in the Australian setting. We already have a considerable number of expert organisations that are able to perform the necessary functions but lack the mandate and the relatively small allocation of new resources that would allow them to take on a national leadership role. For a relatively modest marginal cost, an Australian CDC would complement the existing framework for communicable disease control in the States and Territories, by providing central, expert-driven leadership.

Apart from resources, the Australian CDC would need enabling legislation to allow it to function as a national source of technical capacity separate from the Department of Health and Ageing, and jurisdictional equivalents. The importance of providing independent 'arm's length' advice to government in health-related matters has not only been recognised internationally in communicable disease,⁹ but also in Australia in other areas of health, such as through the establishment of the Australian Commission for Quality and Safety in Healthcare as an independent entity under the *National Health Reform Act 2011*.

Any objective analysis would show that, despite being one of the richest countries in the world, our current communicable

disease control arrangements are leaving us surprisingly vulnerable to outbreaks of infection, whether due to recurrent, known pathogens, or those that are yet to be identified. The establishment of an Australian CDC would bring us into line with the situation in other countries of similar wealth, and provide much needed insurance against the disaster that may never happen or be just around the corner. The time has come for an Australian CDC.

Postscript

Subsequent to preparing and submitting this case report, the authors became aware of the report of the Commonwealth House of Representatives Committee, House Standing Committee on Health and Ageing, tabled on March 20 2013. Each of the arguments we have made here for an Australian CDC was also raised with the Committee as detailed in the report: "Diseases have no borders: Report on the inquiry into health issues across international borders".²³ In response, the Committee has recommended a national audit and mapping exercise followed by an independent review to assess the case for establishing a national centre for communicable disease control. We look forward to the outcomes of the timely enactment of these recommendations.

Competing interests

The authors declare there are no competing interests. This paper reflects the opinions of the authors and does not reflect the opinions of their employers.

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