

Australia's influenza containment plan and the swine flu epidemic in Victoria

Michael G Catton, Julian D Druce and Chris J Birch

TO THE EDITOR: Grayson and Johnson's editorial of 17 June¹ and Eizenberg's viewpoint article of 1 July² both betray blind spots regarding Victoria's laboratory response to pandemic influenza (H1N1) 2009 ("swine flu") and the role of the Victorian Infectious Diseases Reference Laboratory (VIDRL).

Grayson and Johnson incorrectly suggest that Victoria's swine flu infection case definition represented a barrier to laboratory testing and detection of disease spread. Between 18 April 2009 (when the second case was identified in the United States) and 18 May 2009 (when the first case was identified in Victoria), VIDRL tested more than 500 specimens for respiratory viruses. All 16 influenza viruses detected were seasonal influenza strains. Swine flu testing was appropriately reserved for cases with a high pre-test probability of being positive, and even in this at-risk population, no positive cases were detected.

The same authors highlight VIDRL's prominent role in public hospital testing for viral diseases, but mistakenly conflate this with public health laboratory support of infectious disease outbreaks, as if concentration of diagnostic virology at VIDRL were a matter of policy. VIDRL's diagnostic service is available to Victorian health care institutions for as long as they elect to refer specimens. There is no barrier to decentralising this capacity through access to appropriate new technology and scientific expertise. Nevertheless, centralisation of laboratory capability with optimised specimen transport and reporting offers an arguably more efficient model, and is widely used for this reason.

On the other hand, VIDRL's public health role in supporting the Victorian Department of Human Services' (DHS's) outbreak response capability represents a deliberate centralisation of capacity — for good reasons. Public health laboratory testing needs enormous surge capacity — on 1 June 2009, for example, we processed 1004 specimens requiring 1401 swine flu polymerase chain reaction (PCR) tests in a laboratory normally doing 100 respiratory tests daily. Public health laboratories also require expertise to develop, validate and perform essential tests during the early

high-pressure phase of an outbreak, while also working closely with the DHS to manage the large patient data flows that underpin public health actions. There is nothing visionary about frittering away this crucial response capacity by devolving responsibility to a series of small nodes, each below critical mass.

Both Grayson and Johnson and Eizenberg make misleading generalisations about test turnaround times and refer to non-existent backlogs. On 1 June, the most demanding day of the swine flu outbreak, the mean turnaround time for the 1401 PCR tests performed was 24 hours, with 90% of samples being tested within 32 hours of receipt. There are several reasons outside VIDRL's control why occasional delays might have occurred. Firstly, transport from point of collection to VIDRL was often slow (1–3 days, with few if any public hospitals achieving faster times). Secondly, more than 10% of samples arrived with missing or incorrect information regarding addresses for reports. Eizenberg should note the high number of general practitioners completing a private pathology provider's request form but sending the specimen directly to VIDRL, causing delay while results went to the apparent referring laboratory. More than 200 specimens arrived with no request forms at all. Finally, many organisations had no mechanism in place for receipt of large numbers of test results late in the evening, when VIDRL was continuing to work.

With Victoria's move to the "Sustain" phase of the pandemic influenza plan on 3 June, test capacity was directed to defined clinically at-risk patients.³ Many hundreds of samples not meeting the criteria for testing continued to arrive each day. Between 5 and 16 June, these were stored but not tested, and an immediate report went to the sender saying so, and explaining why. Although the capacity to test approved samples was never under threat, stocks of key PCR reagents were transiently sufficiently limited in Australia to preclude testing of samples classified as not meriting a laboratory test in the first place. It may be this scenario that Eizenberg tries inaccurately to describe.

It is disappointing to be drawn into exchanging correspondence in these pages rather than having a constructive debriefing together at the end of this outbreak. No criticism by us of laboratory colleagues is intended, as we know there is a shared sense of the logistic challenges with which we have grappled, and can improve

together. However, the record still needs to be put straight for a small number of physicians with a more limited grasp of the issues.

Michael G Catton, Director
Julian D Druce, Senior Scientist
Chris J Birch, Senior Scientist
Victorian Infectious Diseases Reference
Laboratory, Melbourne, VIC.
mike.catton@mh.org.au

1 Grayson ML, Johnson PDR. Australia's influenza containment plan and the swine flu epidemic in Victoria [editorial]. [Published online ahead of print, *Med J Aust* 17 June 2009].

2 Eizenberg P. The general practice experience of the swine flu epidemic in Victoria — lessons from the front line. [Published online ahead of print, *Med J Aust* 1 July 2009].

3 Victorian Department of Human Services. Health professionals alert — SUSTAIN H1N1 influenza 09 (human swine flu). 5 June 2009. http://www.dcgpa.com.au/_cms/CMS_images/resources/3pm%205%20June%202009%20%20Health%20Professionals%20Alert.1148.pdf (accessed Jul 2009). □