

A pandemic problem with public transport

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TO THE EDITOR: The increasing overcrowding on public transport, particularly trains, in many Australian cities makes for considerable discomfort. As the problem deteriorates, concerns about attributable illness and even death have been raised.¹ Overcrowding on public transport also contributes to the spread of respiratory diseases such as influenza (pandemic or otherwise).²

The risk of contracting influenza is greatest for people who are within 1 m of an infectious person, through exposure to respiratory droplets, particularly for periods of more than 15 minutes.^{3,4} Seasonal influenza, which infects millions of Australians annually — resulting in an estimated 2000 deaths and 10 000 hospitalisations⁵ — is a major health concern.

As a resident of Melbourne and regular train commuter, personal observation supports recent claims of severe overcrowding,¹ with the average number of people sitting or standing within 1 m of another person on Melbourne trains during peak periods having increased markedly over the past few years. If an average peak commuter is now placed within 1 m of 10 people for a prolonged period twice a day (a conservative estimate), at least 100 infectious influenza contacts potentially occur each week. With annual attack rates for seasonal influenza of 5%–10%,⁵ the likelihood of contracting

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infection while crammed into under-resourced train networks is significant. In the context of an influenza pandemic, with higher attack rates, the risk is even greater.

Substantial community resources have appropriately been invested in pandemic planning and mitigation strategies. Perhaps we should devote some of these resources to public transport services to reduce overcrowding. Our national pandemic plan advises that

A very simple way of reducing the chances of being infected or passing on infection is to stand or sit back from other people in public or in the workplace. Where possible, you should try to maintain a distance of at least a metre, which is about a large step.⁴

Such advice is impossible to follow on peak-period train services, certainly in Melbourne.

Investment in train services to reduce the spread of infections would not only help delay the onset of the next influenza pandemic, but would also reduce seasonal influenza and other respiratory virus transmission. Furthermore, it could avert injuries and illness due to crushing and overheating/dehydration, and could conceivably reduce the road toll by taking cars off roads during peak hours. Few pandemic influenza planning investments could deliver such diverse public health dividends while we ride out the latest influenza pandemic and await the inevitable next one.

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1 Lucas C. Rail overcrowding could be deadly, Kosky warned. *The Age* (Melbourne) 2009; 16 Jan. <http://www.theage.com.au/national/rail-overcrowding-could-be--deadly-kosky-warned-20090115-7i6w.html> (accessed Jul 2009).

2 Chin J, editor. Control of communicable diseases manual. 17th ed. Washington, DC: American Public Health Association, 2000.

3 Victorian Department of Human Services. Victorian health management plan for pandemic influenza. Melbourne: DHS, 2007. http://www.health.vic.gov.au/ideas/regulations/vic_influenza (accessed Jul 2009).

4 Australian Government Department of Health and Ageing. Australian health management plan for pandemic influenza. Section B4. Canberra: DoHA, 2008: 64. <http://www.flupandemic.gov.au/internet/panflu/publishing.nsf/Content/ahmppi> (accessed Jul 2009).

5 Australian Technical Advisory Group on Immunisation and Australian Government Department of Health and Ageing. The Australian immunisation handbook. 9th ed. Canberra: Australian Government, 2008. <http://www.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook-home> (accessed Jul 2009). □