

# Letters to the editor

## Influenza vaccination for health care workers

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Infection control staff are on the frontline of efforts to reduce the spread of influenza in our hospitals. While they may sometimes feel their calls for all health care workers to be vaccinated fall on deaf ears, there are a growing number of individuals and organisations supporting their call.

The National Institute of Clinical Studies (NICS) and the Influenza Specialist Group (ISG) supports influenza vaccination of all health care workers and this is based on a growing body of evidence, current practice overseas and on research undertaken by both of our organisations<sup>1-6</sup>.

The National Health and Medical Research Council (NHMRC) also recommends influenza vaccinations for all health care providers including staff of nursing homes and long term care facilities<sup>7</sup>.

The evidence to support the vaccination of health care workers is robust. In a recent systematic review Burls and colleagues<sup>5</sup> concluded that influenza vaccination is highly effective in health care workers with minimal adverse effects, and that it protects them and provides indirect protection to people at high risk of developing complications from influenza. Another recent study by Hayward and colleagues<sup>6</sup> used a pair matched cluster randomised control trial design and found that vaccinating aged care facility staff can prevent deaths, health service use, influenza like illness and hospital admissions in residents during periods of moderate influenza activity.

We know that influenza is far more serious than the common cold and that at least 1500 adults and children die each year in Australia from influenza-related complications<sup>8-10</sup>. We also know that vaccinating health care workers is crucial because they are both at increased risk of catching and spreading the virus to those in their care, especially the elderly and the very young<sup>5</sup>.

A joint Working Party was recently established by NICS and the ISG to investigate how we could best work with health care organisations, infection control staff, health care workers and policy makers to overcome the barriers to vaccination. While some organisations are achieving influenza vaccination levels in excess of 70 per cent, most are below 50 per cent<sup>11-12</sup>. Barriers which are reducing vaccination uptake include fear of side effects, a belief that vaccination can cause influenza, dislike of injections, cost and convenience issues, uncertainty regarding vaccine effectiveness, and perceived low risk of contracting or spreading influenza<sup>11,13</sup>.

Government or organisational policies which make influenza vaccination compulsory for all health care workers in contact with patients will clearly deliver the greatest results. Programs relying solely on educational or public awareness campaigns have rarely achieved take up rates in excess of 50 per cent<sup>5,11,14,15</sup>. Nevertheless, we are optimistic that a vaccination rate of 70 per cent is achievable within the next five years without policy change, provided the following strategies are implemented:

1. Address the myths about influenza  
These include the belief that vaccinations can cause influenza and that influenza is no more serious than the common cold. They must be answered with evidence-based information.
2. Provide the facts about influenza  
Health care workers need to know that influenza is a highly infectious disease that can and does kill vulnerable people. They also need to understand that patients most at risk of developing life threatening complications can be infected by health care workers with influenza.
3. Deliver clear and strong organisational support  
Well promoted organisational policies for free health care worker vaccinations are essential to providing infection control staff with adequate resources and support.
4. Ensure that vaccinations are accessible  
A free vaccination program should be available to all staff at multiple locations and times.
5. Reinforce duty of care obligations  
Organisations have a duty of care to their employees. Health care workers have similar obligations to their patients in relation to protecting them against influenza.
6. Set targets for vaccinations  
Setting annual target rates across institutions encourages personal and organisational support, enables ongoing evaluation and allows infection control staff to share successful projects.

NICS has developed a website to help infection control staff deliver influenza immunisations. The NICS Fight Flu website, [www.fightflu.com.au](http://www.fightflu.com.au) provides a range of information, tools and resources as well a discussion paper developed by the ISG which provides practical strategies for how vaccination rates can be improved. NICS, together with the ISG, welcomes your feedback on case studies and information about successful programs. This can be provided via the Feedback section of [www.fightflu.com.au](http://www.fightflu.com.au).

Despite the best efforts of infection control staff to increase vaccination rates, it is clear that more needs to be done to prevent the spread of this highly infectious disease.

Successful programs built on the best available evidence and the efforts of well supported and informed staff will help us increase the current vaccination rates and save lives.

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## HIV testing following significant body fluid exposure

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Current recommendations regarding significant body fluid exposure state that if the source blood is HIV antibody positive, anti-retroviral treatment should be commenced as soon as possible for the recipient to provide the most effective protection against contracting HIV infection. Reports indicate that early intervention with anti-retroviral treatment may prevent infection following such exposures<sup>1,2</sup>.

Australian infection control guidelines recommend that chemoprophylaxis should commence within 1-2 hours of exposure<sup>3</sup> suggesting that the HIV antibody test should be performed within 2 hours of specimen collection.

To maximise occupational health and safety for employees, the employer would expect to provide testing within two hours and use the best possible assay available. Rapid turnaround times are not much good if the result produced might not reflect the true infection status of the source blood at that point in time.

HIV testing in Australia is regulated and licensed by the Therapeutic Goods Administration (TGA). Where these assays test for 'antibody only' there is a mean antibody negative window period of 25 days (2 – 6 weeks) between the point of infection and becoming antibody positive<sup>4</sup>. During this period the virus is transmissible<sup>5</sup>.

To address this potential problem, manufacturers have produced assays known as HIV Combo assays (4th generation) that simultaneously test

for both antibody and antigen (the gag, p24 protein component of the HIV) with equivalent sensitivities to separate antibody and antigen assays<sup>6,7</sup>. Studies have shown that these types of assays can reduce the window period by up to 20 days (mean 6 – 7 days) as antigen is produced earlier than antibody during the early course of infection<sup>7</sup>. Although extremely rare, there are reports of a second window period between seroconversion with Combo assays<sup>8,9</sup>. However, it would seem likely that the Combo assays would detect more infected donors than the 'antibody only' assays.

Therefore, Combo assays help minimise the potential for missing donors very early in the course of infection and hopefully prevent HIV infection being unnecessarily contracted by the recipient (usually a staff member), thereby offering an earlier opportunity to administer post-exposure prophylaxis.

Blood donors are screened by anti-HIV serology and nucleic acid testing. Yet there is no requirement to test a high risk blood source in an occupational exposure setting with at least a 4th generation Combo assay.

Reasons why some laboratories (approximately 30% in Australia) continue to test with 'antibody only' assays may be due to automation, using a supplier that does not have a Combo assay, or to avoid higher costs of Combo assays. Perhaps the only way to ensure universal testing with these improved assays is for the TGA to withdraw licensing of HIV 'antibody only' assays from diagnostic laboratories.

It is important that coordinators handling significant body fluid exposure incidents understand the assays and their limitations that are employed by their laboratories.

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