



## From the Director's desk

This is the last issue of Disease Watch under my care as I am leaving CDCD and Western Australia. The recent review of the 'almost' monthly bulletin showed high reader acceptance of the format and high trust of the content. It is the intention of CDCD to continue to use this as one means of keeping our colleagues apprised of key current issues.

This month we include a review of the effectiveness of last year's childhood flu campaign. I am unaware of similar coverage and impact being achieved elsewhere in the world; a tribute to all out there who got involved.

WA faces some key challenges in infectious disease control only achievable with the assistance of primary care colleagues. These challenges include attacking the persistent increase in Chlamydia by ensuring no-one with a diagnosis leaves a GP surgery without providing the contact name of at least one person to be followed up; and redoubling efforts to improve childhood vaccination rates, especially among Indigenous people.

I thank all of you who have contributed to the success of disease control during my time; the doctors who notify, those who contact trace and follow up, those who contribute to sentinel systems, and those contributing to our expert panels.

Dr. Paul Van Buynder

## Paediatric Influenza Vaccination Program: a Major Success

Analysis of data from the 2008 Western Australian Paediatric Influenza Vaccine Effectiveness Study has now been undertaken and the results of the first year of activity are impressive.

There were a number of impediments to the commencement of the trial. These included the very late arrival of a totally new influenza vaccine and the significant shortage of general practitioners leading to delays in some parents being able to access their GP. Despite this, the vaccine coverage seen in Perth was better than that achieved in the United States after many years of delivering a similar program there.

Overall, just over half the eligible children aged 6 - 59 months in Western Australia received a dose of influenza vaccine and around four-fifths of these children returned for their second dose. These results are a tribute to the support provided by the general practitioner community in making time in their busy schedules to see additional patients.

Surveys conducted by CDCD after the influenza season showed that one of the most significant factors for parents deciding to vaccinate their children was a positive recommendation from their general practitioner to go ahead.

There were two indicators used to identify the success or otherwise of the trial undertaken last year. These were vaccine effectiveness and influenza notifications.

### Vaccine Effectiveness

Data from the study showed that two doses of influenza vaccine was 65 per cent protective against being diagnosed with laboratory confirmed influenza and was almost 85 per cent protective against hospital admission with an influenza related condition.

These data are evidence that influenza vaccination last year saved a large number of children under five from suffering this serious infectious disease and, in particular, many were saved hospitalisation.



## Influenza Notifications

After a very slow start to the influenza season, the overall number of influenza notifications in 2008 (n = 1015) was very similar to the number reported in the moderately-severe 2007 season (n = 1031).

A review of influenza notifications in different age groups (excluding cases detected only because of study recruitment) showed that the influenza rate was 44 per cent lower in children aged 0 - 4 years in 2008 by comparison with the 2007 season. This reduction was highly statistically significant (see Figure). By contrast, the notification rate in 2008 was significantly higher in the 5 - 19 years age group compared to 2007. These data provide strong evidence for a protective vaccine effect in the eligible 0 - 4 year age-group.

Whilst rates in 2007 and 2008 were similar in other age groups, notifications in people over the age of 75 years also dropped in a statistically significant fashion last year. It is plausible that this is the early sign of an indirect protective effect of vaccinating young children. While adults over the age of 75 are eligible for free vaccination and traditionally have reasonably high uptake rates, it is known that this age group responds least well to influenza vaccine due to decreased immune functionality.

In modern society, where two-thirds of children under the age of five years undergo some form of regular external care, a number of these children spend regular time with grandparents and other elderly relatives.

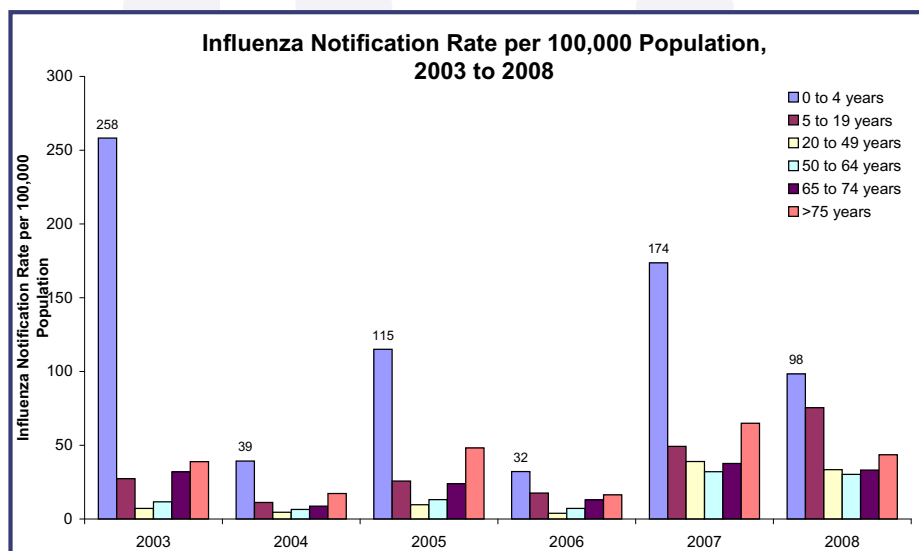
Hence, vaccinating young children may have a beneficial effect in also protecting the very elderly who are at significant risk of severe disease. These data are consistent with similar ecological studies done in other countries. This indirect protective benefit was a key reason for the United States CDC recommending an expansion of their paediatric influenza vaccination campaign to include children between the ages of five and 18 years going forward.

## Summary

- The 2008 Influenza Paediatric Vaccination Campaign was highly successful with just over half the children of Perth being vaccinated. An important component of this was support from general practitioners.
- Vaccine effectiveness data showed that children were highly protected against influenza infection post-vaccination and particularly protected against hospitalisation with illness.
- Significant decreases in influenza notifications were seen in the very young and the very elderly in 2008 relative to 2007, whereas notification rates in other age groups were either higher in 2008 or similar to 2007 rates.

## The Future

The Western Australian study data are currently under consideration by the Australian Technical Advisory Group on Immunisation (ATAGI), having already been assessed by the Influenza Subgroup of this Committee. In the interim, the positive outcome for the children of Western Australia last year has led to an agreement by both vaccine distributors, CSL Pty Ltd and Sanofi Pasteur, to again provide free influenza vaccination for the children of Perth this year to facilitate further assessment of the burden of disease and the benefit to the community. In addition, the Department of Health will fund provision of vaccine for children in rural regions.





This information will be used ultimately to inform a future submission for the inclusion of this vaccine on the National Free Schedule.

Letters have now been sent to general practitioners outlining specific arrangements for accessing paediatric influenza vaccine this year. Children who have previously had two

Western Australia thus faces a challenge in ensuring sufficient children are vaccinated to protect them at a time of decreased awareness. All general practitioners are encouraged to opportunistically vaccinate eligible children attending general practices and to recall parents for paediatric influenza vaccination wherever possible to ensure that the protection offered children last year does not decrease.

### Examples of Influenza Vaccine Dosage Regime for Eligible Children

EXAMPLES	Number of doses of Influenza vaccine received in prior years			Number of Influenza vaccine doses recommended this year
	2006	2007	2008	
Child A	0	0	0	2
Child B	0	0	2	1
Child C	1	0	1	1
Child D	0	1	1	1
Child E	0	0	1	2
Child F	0	1	0	2

#### Key Points to Remember:

- Children 6 months to < 3 years of age should be given the “Junior” 0.25 mL influenza vaccine formulation (or half of the 0.5ml adult formulation); children aged > 3 years should be given the 0.5 mL formulation.
- Children who have received 1 or no doses of influenza vaccine ever in their lives should receive 2 doses of vaccine this year - the doses given at least 1 month apart.
- Children who have received 2 or more doses of influenza vaccine at any time in their lives prior to the current year, require only 1 dose of vaccine this year. (See examples above).

doses of vaccine— either in one year or over the course of previous years—only require one dose of vaccine this year. The attached table sets out the dosage regime for eligible children.

As a large number of children had two doses last year, the logistics of delivering the campaign this year are marginally easier. However, a proportion of parents who decided to vaccinate their children last year did so because they recalled the cluster of childhood deaths associated with influenza the year before. The media campaign encouraging vaccination also reminded parents of the tragedy of those children. As the time period since those deaths increases, parents may be less motivated to attend general practice to have their child vaccinated against influenza.

The challenge of all vaccination programs is that the more successful they are the less people feel they are needed. In some countries this has led to a drop off in vaccination against diseases such as measles, leading to resurgent epidemics. Similar challenges will

arise in the paediatric influenza program.

### Conclusion

- Paediatric influenza vaccination is again being provided free of charge to Western Australian children this year. Children requiring vaccination only require one dose if they have previously ever received two doses of influenza vaccine.
- Last year’s program was very successful in protecting children against illness and hospitalisation. General practitioners and other immunisation providers are encouraged to recall parents of eligible children who were vaccinated last year for follow up doses, and to encourage vaccination with two doses of eligible children not previously vaccinated.



## Readers Survey What you want...

The results of our Reader's Survey are in. Approximately 10% (176 respondents; 146 were GPs) of the readership responded - Thanks! The key messages were:

- Equal numbers wanted a monthly, bimonthly or quarterly publication
- Most respondents read nearly all articles in each issue or most of the articles in each issue.
- Respondents believe what is written in Disease WAtch to be true, nearly all strongly agreed or agreed that the contents are trustworthy.
- On the issue of Disease WAtch assuming too much prior knowledge, the majority of respondents were neutral or disagreed with the statement. However, the spread of responses indicates we need to pay more attention. In reading through the qualitative information, it becomes apparent that too many acronyms are being used, often without explanation of their meaning.
- About half of those responding keep back issues for reference. The other half simply dispose of it or may prefer to visit the online version instead.
- Most want to continue to receive the hardcopy version.
- About a third of respondents now want an electronic version too. We will be offering a means of online subscription to all our newsletters in the near future.

**You can find the electronic version of Disease WAtch at this web address:**

[www.public.health.wa.gov.au/3/533/3/disease\\_watch.pm](http://www.public.health.wa.gov.au/3/533/3/disease_watch.pm)

We look forward to improving the publication for our readership.

## ALERT - Changes to 2009 Immunisation Schedule

- As of February 2009 the split primary immunisation schedule (INFANRIX-HEXA or INFANRIX-PENTA given at 2, 4, 6 months) ceased
- Indigenous and non-Indigenous children now receive the same primary schedule vaccine (INFANRIX-HEXA at 2, 4, 6 months of age)
- Any existing INFANRIX-PENTA and PEDVAX-HIB stock can be used up for Indigenous children. However, you should ensure that you have enough vaccine to complete the primary course
- Influenza vaccine is again on the WA schedule for children aged 6 months to 4 years and is now available. Ordering forms have been circulated. Stock will be replaced on the receipt of a line listing of children vaccinated; FAX to CDCD on 9388 4820
- The HPV vaccine (GARDASIL) catch-up program for females aged 12 - 26 years will cease 30th December 2009. Hence, 30th June is the last day for administering a first dose of the HPV course. This time-frame allows for 2 more doses before 30th December. We encourage you to promote uptake. Please note that funding will cease in December 2009
- The Year 7 school-based program will be ongoing and provides HPV vaccine for females 12/13 years of age.