

Sharp and to the Point

Quarterly newsletter produced by the Immunisation Section, SA Health

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This newsletter is produced quarterly by the Immunisation Section. If you have any feedback or comments on what you would like to see in future editions; or would like to receive further copies or have your name removed from our mailing list, please contact Sara Almond on phone (08) 8226 7177, fax (08) 8226 7197 or email sara.almond@health.sa.gov.au.

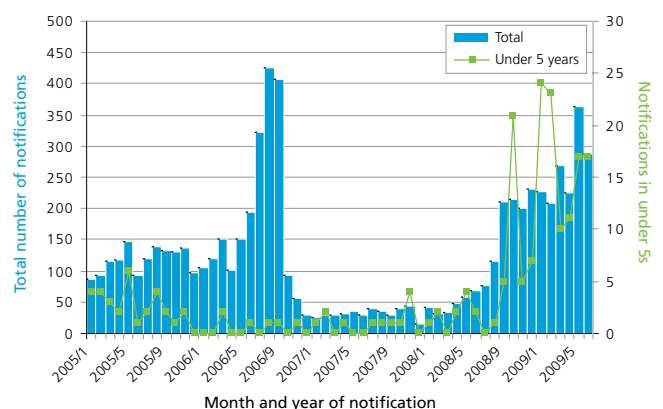
Reminder about the importance of timely pertussis immunisation

Dr Katina D'Onise, Public Health Physician, Specialist Services Section, CDCB
Dr Doug Shaw, Medical Consultant, Public Health, CDCB

Pertussis (commonly known as whooping cough) is a common respiratory infection that is continually present but is known to produce outbreaks in cycles of every 3-4 years. The aim of the pertussis vaccination program is to protect infants with incomplete immunisation (by virtue of age) for whom the risk of death, if infected, is approximately 0.8%.

High numbers of pertussis infections have been notified in South Australia and Australia wide in 2009 representing the expected periodic increase in case numbers. There have been 1583 pertussis infections notified to 30 June 2009, compared with 279 in 2008, 176 in 2007 and 820 in 2006 year to date (figure 1). Children under 5 years of age made up 6.4% of notified cases in 2009 year to date. Of greatest concern is the report in 2009 of 3 infant deaths interstate from pertussis infection.

Figure 1: Pertussis notifications in SA 2005 - June 2009



Please note, the lower numbers on the right hand axis, reflect the number of notifications in the under 5 year olds, the total number of notifications is the higher number on the left hand axis.

It is important to note that immunity from prior pertussis infection, as well as from childhood pertussis immunisation, is not life long. Adults and older siblings may spread it to vulnerable infants who are unprotected or not fully protected by vaccine.



Continued

This, along with the recent high number of notifications in children under 5 years old, highlights the importance of complete and timely vaccination of children at 2, 4 and 6 months of age, 4 years of age, and 14 -15 years of age. Further, it is also recommended that adults who have contact with infants and children (e.g. prospective parents, new parents, grandparents, childcare workers and health care workers) receive a booster vaccine.

For further advice, please contact the CDCB on (08) 8226 7177.

Did you know?

- Pertussis kills about 250,000 children worldwide, every year. Survivors can be left with brain damage, or can develop other serious complications such as pneumonia and encephalopathy
- Maternal antibodies do not give adequate protection against pertussis and babies can become infected before they are old enough to be fully immunised
- About 1 in 200 babies under 6 months who have pertussis will die from pneumonia or brain damage
- Pertussis is highly infectious, potentially infecting 70 -100% of susceptible house hold contacts
- It can last up to 3 months
- Epidemics occur every 3 - 4 years
- A study of children in Colorado, USA, concludes that herd immunity does not provide protection against pertussis. Researchers also conclude that unvaccinated children are 23 times more likely to get pertussis than children who are vaccinated. (NCIRS Immunisation Newsbrief, June 2009)

What can providers do?

- Encourage all prospective or new parents, and anyone involved in caring for young children, to receive a dTpa vaccine (Boostrix or Adacel)
- Check all HCWs and adults working with young children have received a dTpa vaccine
- Encourage anyone concerned with being infected with pertussis to receive a dTpa vaccine.

March 2009 ACIR coverage reports for the 60 - 63 month cohort, indicate South Australia is over 6% lower than the Australian national rate. Providers need to be proactive in increasing these rates to avoid children being at risk of a vaccine preventable disease.

- Check all children's immunisation histories to ensure all scheduled immunisations are up to date
- Send reminder letters to all parents/guardians of all children when they who reach the age of 4 years old that they are **now due** booster immunisations. (Reminder letters will be sent from the ACIR when the child has turned 4 years and 1 month of age, if they have not received confirmation that this immunisation has been administered).

Barossa Valley LIC achieves 91% coverage rate for 4 year olds

Attaining consistently high childhood immunisation rates and in particular for the 4 year old cohort, is an ongoing challenge for many immunisation providers. Tracy Maynard, Local Immunisation Coordinator, Barossa Valley Division of General Practice, has managed to do just that, and with a coverage rate of 91% that's great news.

Tracy used the following promotional strategies to achieve and retain high 4 year old immunisation coverage rates for her region:

- Posters, post cards and T shirts used zoo characters to promote 4 year old immunisations
- Promotional "Immunisations are due at 4 not 5" posters were displayed in doctors surgeries, childcare centres and kindergartens
- General practices sent personalised postcards to all 4 year olds who were due their immunisations. Once immunised the 4 year old was given a T shirt with zoo animals on it saying "I'm immunised - to keep diseases away!"



Acronyms

NIP - National Immunisation Program

HCW - Health Care Worker

SBIP - School Based Immunisation Program

dTpa - diphtheria, Tetanus and pertussis vaccine

TGA - Therapeutic Goods Administration

ACIR - Australian Childhood Immunisation Register

NCIRS - National Centre for Immunisation Research and Surveillance

Rotavirus vaccine – A success story

Professor Geoffrey Davidson

Senior Staff Gastroenterologist
Centre for Paediatric and Adolescent Gastroenterology
Women's and Children's Hospital

Infectious diarrhoea (gastroenteritis) is the second most common reason children in Australia are admitted to hospital and the major cause of this is rotavirus. This is a highly contagious virus that spreads rapidly in families, child care centres and can still cause fatalities even in the developed world. In the developing world it kills up to 1,000,000 children a year.

In Australia rotavirus gastroenteritis causes 10,000 hospital admissions per year in children, 22,000 emergency department visits and about 120,000 general practitioner visits. Every Australian child will have been infected with rotavirus before their 5th birthday. To highlight the importance of rotavirus infection, particularly on families of children with this illness, a New Zealand study has shown that 75% of the siblings and 30% of adults in families acquire rotavirus infection when an infected child returns home from hospital. This type of spread is also implicated in child care centres. These facts highlight how important it is to be able to provide protection against this major cause of childhood illness.

Another important issue in regard to rotavirus gastroenteritis is the community cost of this disease. It amounts to about \$250,000,000 annually due to a combination of factors that include work absenteeism, parents having to stay home to look after sick children and closure of child care centres.

In July 2007 two rotavirus vaccines were approved for use in Australia. RotaTeq® and Rotarix®. Both vaccines have been shown to be very effective in reducing hospital admissions by up to 90%. South Australia decided to use the RotaTeq® vaccine. Both vaccines have been trialled in over 60,000 children with no serious adverse effects and have now been licensed to be used in over 100 countries. Australia was the second country after the United States to place the rotavirus vaccines on their routine immunisation schedules. The United States started their vaccine program using RotaTeq® three years ago and have now shown a greater than 90% decrease in hospital admissions for rotavirus gastroenteritis. The early information after 18 months use of the vaccine in Australia is showing that it is already having an impact in reducing the number of hospitalisations for rotavirus gastroenteritis.

The rotavirus vaccines will have an enormous impact on infant health in both the developed and hopefully in the developing world. With this information now in hand it makes it very important that all Australian children are immunised against this deadly disease and hopefully over the next decade this condition will gradually disappear from our community and our children will not have to endure such a severe and life threatening illness.

Reminder:

Dose 1 of RotaTeq® must be administered no later than the end of the **12th week** of age, with **dose 3** by no later than the end of the **32nd week** of age; with a **minimal interval of 4 weeks** between each dose.

Do you need to order 'just enough' vaccine?

Immunisation providers in South Australia can order NIP funded vaccines each fortnight (excluding 2 weeks over the Christmas period) from the Vaccine Distribution Centre, according to a specific timetable sent to providers annually. It is important that providers do not stock too much vaccine. Vaccine should only be ordered according to the previous fortnights usage.

The following formula will help ensure that enough vaccine is ordered on a fortnightly basis to meet demand. Over time, the application of this formula will allow you to streamline your ordering process and can result in ordering only the amount of vaccine you will require.

	Vaccine delivery day	Vaccine ordering day	Formula for ordering vaccine	Total amount to re-order
Action	Document total number of doses in the fridge (when vaccines are delivered and put away in the fridge)	Document the total doses used since the previous vaccine delivery	Order the numbers of doses used in the previous fortnight plus 10%	Place order (see example below)
Example	<i>Meningococcal C</i> 20 doses (in fridge)	<i>Meningococcal C</i> 10 doses left in fridge. 10 doses have been used.	<i>Meningococcal C</i> 10 doses (used) + 10% = 1 dose	<i>Meningococcal C</i> Order 11 doses

Immunisation alert

Does your immunisation service see patients who are refugees?

Many refugees who are newly arrived in Australia attend Local Government New Arrival Refugee Immunisation (NARI) clinics to receive immunisations recommended as part of the NIP. These clinics provide an interpreter to assist with communication and obtaining an accurate immunisation history and valid consent.

There may be instances where a refugee presents at their health care practitioner for other health care needs, and is then given vaccines they may have already received.

It is important that all **Immunisation Providers check immunisation history** before offering vaccines so that clients are not vaccinated unnecessarily.

Gardasil® now indicated in women through to 45 years

The TGA has approved the extension of the indication for Gardasil® to include women up to 45 years of age.

Gardasil® is now indicated for females from 9 to 45 years of age for the prevention of cervical cancer, precancerous or dysplastic lesions, and genital warts caused by HPV types 6, 11, 16 and 18. Gardasil® is also indicated in males aged 9 to 15 years of age for the prevention of infection caused by these HPV Types.

(Source: CSL Press Release, May 2009)

Currently Gardasil® is funded only for female students in the Year 8 SBIP. Those eligible females who commenced the Gardasil® course in the catch up program and received dose 1 prior to 30 June 2009 can complete doses, 2 and 3 as funded vaccines. All doses need to be completed by 31 December 2009.

For those not in the above categories, Gardasil® is available as a private prescription from their GP.

Innovation and best practice in immunisation

Congratulations to the *Children's Ward at the Lyell McEwin Hospital*.

The children's ward is a 17 bed unit, admitting children with a variety of childhood illnesses. The ward aims to assess the immunisation history of children who are inpatients. Upon a child's recovery and with parental consent, all due or overdue immunisations are administered to a child prior to discharge.

Ward staff are proactive in educating families about immunisation and work to ensure there is a catch up plan in place before a child is discharged from the hospital. Electronic access to the ACIR allows easy checking of a child's status (staff also access the Immunisation Section if further assistance is required).

A large percentage of staff regularly attend immunisation update sessions, ensuring they are equipped with the latest knowledge in immunisation. The children's ward staff have also been known to chase down a doctor who hasn't collected a consent form to allow the child to be immunised before discharge!

Well done to all the dedicated staff on this ward. Congratulations, and keep up the great work!



*Back row, left to right - Sandy Plowman, Georgina Wilson, Michele Howard, Sheree Reeves, Angela Platten, Michelle Digwall, Dennielle Shannon
Front row, left to right - Ami Rogers, Janet Bell*

Each quarter the Immunisation Section will send a quality gift hamper to the provider who fits the values of innovation and best practice in immunisation. Please send nominations to Sara Almond at the Immunisation Section- (08) 8226 7177 or email Sara.Almond@health.sa.gov.au

Questions and Answers

Q When can someone receive a funded MMR vaccine?

A MMR is free for all children at 12 months and 4 years of age. If there is a confirmed measles case in SA, the MMR vaccine is offered free as directed by the Public Health Alert for a 4 week period.

Q If an Aboriginal child presents for 4 year immunisations having not received hepatitis A or Pneumovax 23® vaccine, is a catch up recommended?

A Hepatitis A and Pneumovax 23® vaccines are recommended on the NIP for Aboriginal and Torres Strait Islander children in SA, NT, QLD and WA.

In SA these vaccines are offered at 18 months and 2 years of age. If an Aboriginal or Torres Strait Islander child presents who has not received these vaccines, please contact the Immunisation Section on (08) 8226 7177 for further advice.

For more information please contact Immunisation Section on (08) 8226 7177 or by emailing Sara.Almond@health.sa.gov.au www.health.sa.gov.au/pehs/immunisation-index.htm

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Focus on...

H1N1 Pandemic Influenza

"Response after one dose of a monovalent Influenza A (H1N1) 2009 vaccine - preliminary report"

The New England Journal of Medicine, September 10 2009

A novel influenza A (H1N1) 2009 virus is the cause of the first Influenza Pandemic in 41 years. In the Southern Hemisphere the virus has been the dominant circulating influenza strain during the winter months. In the Northern Hemisphere the virus has continued to spread rapidly despite the warmer climate. A safe and effective vaccine is paramount to prevent infection and to decrease the effects of a pandemic.

Study groups

A total of 240 subjects were selected and divided into 2 age groups i.e. one group above age 50 and the other below age 50. The age groups were needed to explore age related differences in immune response, based on possible previous exposure to similar subtype H1N1 in 1957-1958.

The monovalent, unadjuvanted, inactivated, split-virus vaccine was manufactured using the same procedures as seasonal influenza vaccine. Two different doses (15ug or 30ug) were trialled as there was uncertainty relating to a 2 dose regime and whether a higher antigen content was required.

Results

Antibody titres were evaluated following international guidelines. Results following day 21 indicate a 96.7% successful immune response following 15ug dose and a 93.3% immune response in the subjects receiving 30ug dose. It was found that the younger group produced a higher immune response. Higher titre levels following one dose in the older group would have possibly been indicative of pre existing antibodies from exposure to H1N1 viruses circulating before 1957.

The results indicate a single dose of 15ug can produce a robust immune response.

Safety and adverse events

Preliminary safety reports are from results to date and will be on going. Frequency, duration and intensity of adverse events were evaluated:

Local adverse events – 46.3% included injection site tenderness and pain.

Systemic adverse events - 45% included headache, malaise and myalgia.

The majority reported events to be mild to moderate in intensity. Two reports were of more severe reactions with myalgia, malaise and nausea, one resolved within 5 days, the other 6 -10 days. Three subjects had influenza like illness and were screened with nasal and throat swabs for virologic testing, one of which indicated positive H1N1 result.

Did you know?

Latest research conducted at London's Imperial College have claimed that the H1N1 2009 Pandemic Influenza virus can infect cells deeper in the lungs than seasonal influenza virus can and that this may be why people infected with H1N1 are more likely to suffer more severe symptoms than those infected with seasonal flu.

(Reference: Biotechnology, Volume 27, Number 9, September 2009)

Questions and Answers

Q Is it too late to be vaccinated with the Panvax® H1N1 vaccine?

A *It is never too late to gain immunity. Whilst the current wave of the pandemic is declining in Australia, we are still seeing infection and deaths. Unlike seasonal flu, pandemic flu is not just a winter infection. We may have importation of the virus from infected travellers exposed due to the large number of cases now occurring in the Northern Hemisphere. A safe and effective vaccine is the most important intervention in a pandemic. The pandemic H1N1 vaccine will provide protection against this infection, assist in minimising the amount of flu circulating in the community and also help protect against any future waves of the virus.*

Vaccination of children 9 years of age and under will commence once safety data for this age group is available.

Q Can I still get a seasonal flu vaccine after being vaccinated for pandemic (H1N1) 2009 influenza?

A *Yes, and it is particularly important to do so if you are travelling overseas. Panvax® H1N1 vaccine only protects you against the pandemic (H1N1) 2009 influenza virus. To reduce your risk of influenza during Australia's winter months you should get the seasonal flu vaccine next year, particularly if you are in a high risk seasonal flu group.*

Q Is it safe to be vaccinated at any stage in my pregnancy?

A *Yes. Influenza vaccines are safe during all stages of pregnancy. Pregnant women are at risk of severe complications if they catch the pandemic H1N1 virus so vaccination is strongly recommended.*

Remember - when using multi dose vials:

Drawn up syringes are to be discarded after 4 hours

Opened vials must be discarded after 24 hours

For further information please refer to www.flu.sa.gov.au or www.healthemergency.gov.au

Q Who should not have the Panvax® H1N1 vaccine?

A *People should not be given Panvax® H1N1 vaccine or any other influenza vaccines if they:*

- *have experienced anaphylaxis, following a previous dose of any influenza vaccine;*
- *have experienced anaphylaxis following receipt of any vaccine component, which includes neomycin or polymyxin antibiotics; or*
- *have a severe allergy to eggs, including people who have experienced swelling of the lips or tongue, or had acute breathing problems or convulsions, after eating eggs.*

Prior to vaccination with any vaccine, providers should refer to the pre vaccination checklist to assess a person's medical fitness for vaccination.

Q Why is thiomersal in the vaccine?

A *Thiomersal has been used in medical products and vaccines for more than 60 years and is the most commonly used preservative in multi-dose vials. It has a very long safety record.*

Thiomersal, which contains a small amount of mercury, was removed from vaccines given to young children in Australia simply as a precaution to reduce the theoretical risk of exposure to mercury in babies, particularly those of very low birth weight.

There are 2 forms of organic mercury; methyl mercury and ethyl mercury. Thiomersal contains only ethyl mercury which is rapidly converted to inorganic mercury and is excreted in the faeces with minimal accumulation in the body tissues. Most reports of mercury toxicity refer to methyl mercury.

There is no evidence that thiomersal in vaccines has caused any developmental or neurological abnormalities, such as Attention Deficit Hyperactivity Disorder (ADHD), autism or any other health problem.

Q What is Guillain Barré syndrome and can I get it if I am vaccinated with Panvax®?

A *Guillain-Barré syndrome (GBS) is a rare and sometimes severe condition affecting the body's nerves. What causes GBS is not clear, but it generally happens after infections such as stomach bugs, coughs and colds. GBS is thought to be due to the immune system mistakenly attacking the body's own nerves. This results in muscle weakness and sometimes paralysis, which can last for weeks to months. Most people recover completely but the consequences can be severe in some.*

The risk of developing GBS from influenza infection is 4 times higher than from an influenza vaccine. There have been reports overseas of a possible association between influenza vaccinations and GBS but these are very rare - about one in a million.