

Albury Wodonga Regional GP Network

www.bordergp.org.au

IMMUNISATION NEWSLETTER – APRIL/MAY 2009

PLEASE ENSURE ALL GPs, NURSES AND OTHER INTERESTED STAFF RECEIVE THIS NEWSLETTER

IN THIS EDITION

- Flu Season Again Medical Director
- Q Fever
- Measles Alert
- Tetanus
- Immunisation rates and Conscientious Objectors
- **Pertussis Epidemic (4 page feature)**
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FLU SEASON AGAIN! *Have you and your staff all had your flu shot yet??*

2500 deaths per year in Australia.

15 000 hospitalisations.

Best protection? - Immunisation!

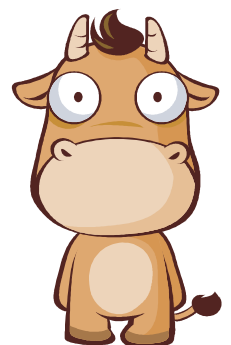
Also important - infection control.

New guidelines don't recommend covering your mouth and nose with your hands when you cough or sneeze, transferring germs to your hands, where they can easily be spread if not immediately washed. Instead, cough or sneeze into a tissue (and discard) or into your sleeve.

CHANGES TO Q FEVER VACCINATIONS IN VICTORIA

Q fever management in Victoria underwent changes from 1 January 2009. DHS no longer maintains a Q fever provider list, or register of vaccinated persons. Queries regarding persons vaccinated prior to 1 January 2009 may continue to be directed to DHS.

Vaccination providers are now encouraged to send details to the National Q Fever Register, which is maintained by Meat and Livestock Australia. The Register is web based and registered organisations can check a person's screening and vaccination status and submit details online. Details of how to access the Register are available at www.qfever.org.



MEASLES ALERT

Pertussis is not the only vaccine preventable disease to be causing concern this year.

Measles outbreaks continue to occur in NSW and Victoria.

At least 30 cases of confirmed measles have now been notified in Victoria to date since 2009.

Generally cases have originated from overseas and affected adults and children have not received measles vaccination.

People born during or since 1966 who do not have documented evidence of receiving two doses of a measles containing vaccine or documented evidence of laboratory confirmed measles are considered to be highly susceptible to measles.

For more information on measles see the February/March immunisation newsletter.

TETANUS CASE IN JANUARY 2009

DHS was notified of a 62 year old female with tetanus in January this year.

An overseas trained doctor experienced with tetanus diagnosis identified her symptoms.



The woman had been gardening on New Years Day and was injured with a splinter in the webbing between her toes. Because of her history of lymphoedema she called a doctor to her home. The splinter was not able to be removed, a tetanus vaccination was offered which she refused and she was advised to attend her GP for follow up but did not attend.

Two weeks after the splinter injury the woman noted a sore foot but not at the site of the splinter, an intense ache in her jaw, back of skull and neck and restricted chewing. She attended the doctor with her symptoms and incidentally mentioned the splinter in her foot. The woman was referred to hospital for plastic surgery to remove the splinter, immunoglobulin, Valium and antibiotic treatment and tetanus vaccination.

The woman was Victorian born and thought that she'd had her primary course of tetanus vaccine. She remembers having a tetanus vaccine 15-20 years ago following a minor injury but had no vaccinations since.

Communicable Disease Notification

NSW - GSAHS Ph 02 6080 8915

VIC - DHS Ph 1300 651 160.

IMMUNISATION RATES - HOW ARE THEY AFFECTED BY "CONSCIENTIOUS OBJECTORS"?

The conscientious objection rate in Australia is very small:

Nationally - 1.23%.

In Victoria, - 1.12%.

In our division - 1.03%

The rate may be a little higher, as a result of those who refuse to sign a conscientious objection form.

Vigilance in reporting data to ACIR promptly, correcting any incorrect data on your monthly ACIR statements promptly, sending out recalls to children overdue

PERTUSSIS EPIDEMIC and VACCINATION OF ADULTS in NSW

All practices should now be aware that due to an epidemic of pertussis in NSW (over 4000 cases by mid March 09), NSW Health has made the following recommendations – *until further notice*.



- Free Boostrix be offered to all parents, carers and grandparents of babies under 12 months of age; and couples planning pregnancy
- Babies first vaccination be brought forward from 8 weeks to 6 weeks of age, to commence some pertussis protection as early as possible

Parents and family members are the main source of infection for babies (60%). Babies are at risk from birth as no pertussis protection is passed from the mother to the newborn infant.

Pertussis can lead to complications such as haemorrhage, convulsions, pneumonia, coma, inflammation of the brain, permanent brain damage, long term lung damage, and death.

Boostrix is highly recommended (but not funded) for all adults planning pregnancy, health workers and child care workers, and adults wishing to protect themselves.

Please note: When offering Boostrix to adults, please check if they received a primary course of tetanus containing vaccine in the past. Most will have been vaccinated as children, but this should not be assumed, particularly in adults not raised in Australia. Tetanus vaccine was introduced progressively into the childhood schedule after WWII.

Where adults have not received a primary course of tetanus containing vaccine (either DTPw, CDT, tetanus toxoid), they should be offered:

- Dose 1 dTpa (Boostrix) – diphtheria, tetanus, pertussis
- Dose 2 at least 4 wks later dT (ADT) - Adult diphtheria and tetanus
- Dose 3 at least 4 wks later dT (ADT) - Adult diphtheria and tetanus
- Dose 4 -10 years later dT (ADT) - Adult diphtheria and tetanus
- Dose 5 -10 years later dT (ADT) - Adult diphtheria and tetanus

In the event that dT is not available, dTpa can be used for all 3 doses of the primary course; however this is not a routine recommendation as there is no data on the safety, efficacy and immunogenicity of dTpa used in multiple doses for primary vaccination.

What's the difference between:-

DTPa (in Infanrix hexa/penta/IPV) and dTpa (in Boostrix, Boostrix IPV, Adacel, Adacel Polio)?

dTpa contains substantially lesser amounts of diphtheria toxoid and pertussis antigen than the childhood formulation. DTPa is only recommended for use in children ≤ 8 years of age.

Why commence the adult course of primary vaccination with dTpa (Boostrix), then give dT?

Boostrix provides some pertussis immunity whereas dT contains no pertussis antigen.

Why aren't additional booster doses of dTpa (Boostrix/Adacel) recommended?

Data on the duration of immunity to pertussis following a single booster dose of dTpa is limited. Additional recommendations must await further data.

What vaccines should be given to an adult who has had no previous vaccinations at all?

- 1 dose of dTpa, followed by 2 doses of dT, followed by 2x 10 yearly boosters of dT (as above)
- 3 doses of IPOL (funded) at 1 - 2 monthly intervals
- 2 doses of MMR at least 1 month apart (funded in NSW for adults born in or after 1966)

Additional vaccines may be recommended (funded/not funded) depending on the individual

eg. Female aged 12 - 26 years - 3 doses of funded HPV vaccine; Injecting drug user - 3 doses of adult hep B (funded). For further recommendations, see the Australian Immunisation Handbook, and the Victorian Quick Catch-up Guide.

Information for Victorian Clinics

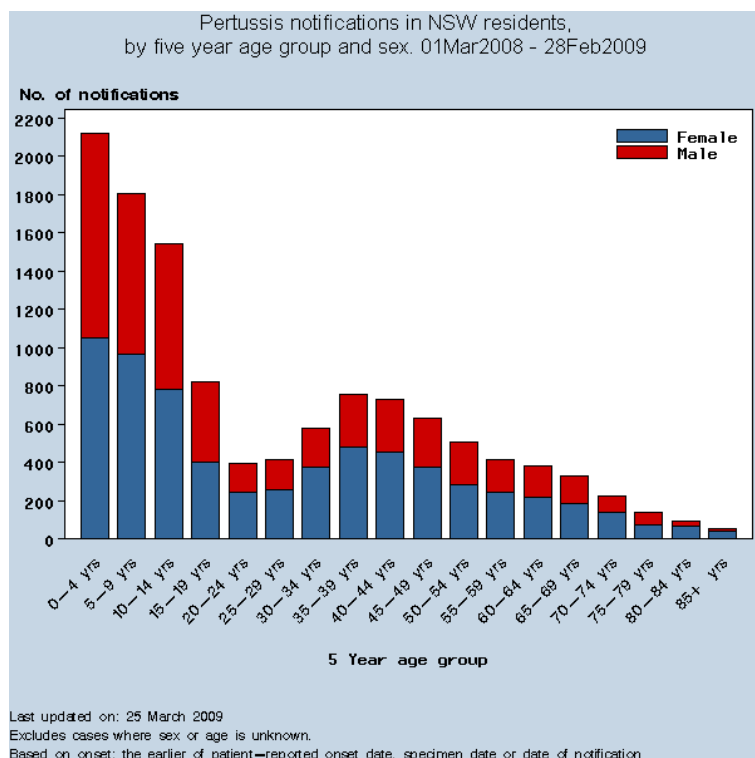
At this stage, there are no plans by DHS to offer free Boostrix to parents, carers and grandparents of babies under 12 months in Victoria, even though the notification rates have also increased significantly.

HOWEVER, increased rates of pertussis are occurring throughout our area, and many cases are in vaccinated individuals.

Three Albury practices have kindly agreed to take on referral, NSW residents eligible for free Boostrix, who normally see VIC practices, and to bulk bill these vaccinations.

It's great to see cross-border collaboration taking place to deal with this sort of issue.

Please contact the GP Network for the contact details of these practices.



Who's getting pertussis and why?

The NSW notifications in the last 12 months, show a large number of cases are occurring in children < 14 years of age, even though we have reasonably high immunisation rates.

Pertussis immunity wanes over time; vaccination lessens the likelihood of developing symptoms, and provides better immunity than natural infection. It offers better than 90% protection against severe disease, but only about 40% protection against a cough lasting a week or two, and decreases over time.

Overall, the vaccine is about 75 - 80% effective in the first 5 years, falling to about 45 % after 10 years.

If a patient presents with a cough, particularly a paroxysmal cough followed by vomiting, please consider pertussis a possible cause, and arrange for appropriate serological testing. The majority of patients with pertussis will not have a "whoop" type cough.

Positive cases must be reported to Communicable Diseases.

NSW Health Department Notifiable Diseases Database System (NDD) (HOIST), Communicable Diseases Branch and Epidemiology and Surveillance Branch, NSW Health Department.

Pertussis Statistics for our NSW LGAs (Albury, Corowa, Culcairn, Hume)

27 notified cases from 1/1/09 - 25/3/09

Immunisation Status for those under 20 yrs (18 cases):

13 (72%) immunised for age.

5 (28%) not immunised by choice showing that unimmunised children are over represented in the cases notified relative to the known high immunisation rates in these LGAs.

Stats for the area formerly known as GMAHS:

For all of former GMAHS: 225 notifications since 1/1/2009, 3 hospitalisations, 2 in children less than 1 yr old and too young to have been immunised who were infected by infectious household or close family contacts.

Age in years	Number of cases
0 - 4	3
5 - 9	4
10 - 14	7
15 - 19	4
>20	9

TREATMENT OF PERTUSSIS IN ADULTS *Information from the Australian Prescriber April 2009 Vol 32*

Pertussis, is a highly contagious disease caused by the bacterium *Bordetella pertussis*. It is generally thought to be under-diagnosed and remains the least well controlled of all the vaccine preventable diseases targeted by the Australian National Immunisation Program. Epidemics occur every 3–4 years. This is despite immunisation continuing to increase, with more than 90% of one-year-olds being fully vaccinated.

Literature suggests that epidemics result from waning immunity in later childhood and adolescence. Data suggest that 10–35% of subacute coughing illnesses in adults are due to pertussis infection. Death in individuals older than 10 years of age is rare and non-immunised infants remain the most likely group to have severe life-threatening disease requiring hospitalisation.

Clinical Presentation

The first 1–2 weeks of illness with *B. pertussis* resembles other upper respiratory tract infections, with runny nose and mild cough. This is followed by the paroxysmal coughing phase in the 2nd & 3rd weeks.

Diagnosis

As classic symptoms of whooping cough do not usually exist in adults, exposure to others with prolonged cough is used by some as an indicator of pertussis infection. Although less frequent in adults, post-tussive vomiting may also indicate pertussis. It is therefore important to remember *B. pertussis* when reviewing all adolescents and adults with a chronic cough.

A number of investigations can be performed to support the diagnosis of pertussis. These include:

- bacterial culture, polymerase chain reaction (PCR) or immunofluorescence assays of nasopharyngeal swab or aspirate samples
- serological testing to detect rises in immunoglobulin (Ig) A or IgG titres to *B. pertussis* antigens
- lymphocyte count (raised counts are a non-specific indicator of infection).

For patients presenting early (within the first three weeks) and before the start of antibiotic therapy, PCR, immunofluorescence and culture may be useful.

For patients who present later, serological testing – which is reliant on an immune response – is often more helpful. Pertussis-specific IgA is only produced after natural infection, whereas IgG rises with vaccination and natural infection. While a positive IgA test confirms the diagnosis of pertussis, a negative result does not exclude the possibility of infection. (It is important to remember that a small proportion of the population has an IgA deficiency.) Paired samples showing rising titres of specific IgA or IgG are a more reliable indication that the patient has pertussis.

PCR-based testing is the most sensitive and specific of all investigations, particularly early in the illness. It is sensitive for longer than culture and is less likely to be affected by antibiotic treatment. Although direct immunofluorescence is highly specific, it has limited sensitivity. Its main advantage is speed.

Treatment

When given early in the illness, antibiotics can decrease the infectious period, but have no effect on the duration or severity of disease. Symptomatic treatment of cough has shown no clear benefit. Antibiotic prophylaxis of contacts is recommended for certain high-risk groups, but there is limited evidence of its effectiveness. Although infants remain the most at risk for severe, life-threatening disease, it is adolescent and adult booster immunisation which remains critical for prevention programs.

Antibiotic Treatment (see table 1)

Antibiotics are recommended in the initial catarrhal phase of infection when they are effective in eliminating *B. pertussis* from the nasopharynx and reducing the infectious period. However, after three weeks of coughing, antibiotics have no measurable effect on reducing the infectious period and are not recommended. Patients should avoid contact with susceptible individuals until at least five days of antibiotics have been taken.

Erythromycin has been commonly regarded as the treatment of choice for pertussis infections. A 14-day erythromycin course is often recommended, although studies have shown similar efficacy with a seven-day regimen.

The newer macrolides, such as clarithromycin and azithromycin, have replaced erythromycin as the standard treatment. (However, there is not enough clinical evidence to recommend roxithromycin for pertussis infection.) The newer macrolides have fewer gastrointestinal adverse effects and reach higher concentrations in respiratory secretions. This improved safety profile is of particular importance in a therapeutic regimen aimed at eradication of organisms rather than improvement of symptoms. Studies have shown that patients are more compliant when taking the newer macrolides compared with erythromycin.

Trimethoprim with sulfamethoxazole can be used as an alternative to macrolides if necessary, but is not the first choice of therapy.

Table 1**Effective antibiotic treatment for pertussis**

Drug	Adult dose	Daily frequency	Duration
clarithromycin*	500 mg (7.5 mg/kg up to 500 mg)	twice	7 days
erythromycin	250 mg (10 mg/kg up to 250 mg)	four times	7 days
azithromycin*†	10 mg/kg (up to 500 mg)	once	3 days
azithromycin*	day 1: 500 mg first day (10 mg/kg up to 500 mg) days 2–5: 250 mg (5 mg/kg up to 250 mg)	once	5 days
trimethoprim with sulfamethoxazole	160 + 800 mg (4 + 20 mg/kg up to 160 + 800 mg)	twice	7 days

* best regimens for microbiological clearance with fewer adverse effects

† this regimen is documented in a Cochrane systematic review although not in Australian antibiotic guidelines

Managing household contacts.

B. pertussis is highly contagious and a significant proportion of contacts become infected (70–100% of household members). The incubation period is typically 7–10 days (range of 4–21 days). Although there is insufficient evidence that antibiotic prophylaxis of close contacts reduces the number of new cases or improves clinical symptoms, it is recommended primarily because of the high risks of morbidity and mortality in non-immunised infants.

It is suggested that prophylaxis be given as soon as possible, but within three weeks of symptom onset in the infected contact. The dose and duration of antibiotics for prophylaxis are the same as for treatment.

As three or more injections are required to confer protection, infant vaccination is not helpful in controlling a pertussis outbreak. However, unvaccinated contacts aged eight years or older can be offered a diphtheria, tetanus and acellular pertussis vaccine and younger contacts can be given a catch-up course.

Antibiotic prophylaxis for 'high-risk' contacts of pertussis cases

- Women in their last month of pregnancy, irrespective of vaccination status
- Members of a household which includes a child less than 2 years who is not fully vaccinated*
- Children and adults who attend a childcare facility where children under 2 years are not fully vaccinated
- Healthcare workers and babies (if exposed for >1 hour) in a maternity ward or newborn nursery

* Fully vaccinated = three effective doses of pertussis vaccine given at least four weeks apart



INTRODUCTION DATES FOR RECENT NEW VACCINES

Vaccine Brand (Antigen)	Introduction	Eligibility for free vaccine*
HBVax11 Paed. (Hepatitis B)	May 2000	Born from May 2000
NeisVacC/Meningitec (Meningococcal C)	January 2003	Born from January 2002
Boostrix (dTpa)	January 2004	Year 10 of secondary school
Prevenar (Pneumococcal)	January 2005	Less than 2 years of age**
Varilrix (Varicella)	November 2005	Born from may 2004
Gardasil (Human papillomavirus)	April/July 2007	Women less than 27 yrs of age
RotaTeq/ Rotarix (Rotavirus)	July 2007	6 wks - 32 wks/ 6 wks - 24 wks
Infanrix hexa (dTpa, polio, Hepatitis B, Hib)	March 2008	Less than 8 years of age
Hiberix (Hib)	September 2008 (VIC)	Less than 5 years of age

*Please refer to Free vaccines supplied by DHS Victoria and their indication for use (September 2008) for more detailed eligibility advice at: http://www.health.vic.gov.au/immunisation/general/policy_and_procedure

**Additional Pneumococcal vaccines are required if the infant or child has an underlying high risk medical condition (The Australian Immunisation Handbook 9th Edition, page 244)

The following link lists dates vaccines have been introduced onto the National Immunisation Program:
<http://www.health.vic.gov.au/immunisation/general/history>

IMMUNISATION PROBLEMS WITH MEDICAL DIRECTOR

Have you experienced problems when recording vaccines on Medical Director?

The division has been advised by GPV that some practices have recently experienced difficulties – not being able to select Infanrix hexa (only Infanrix IPV) at 6 months of age.

If you experience similar problems with Medical Director, please don't record the vaccine incorrectly – use the "other vaccine" box from the drop down menu.

I would like to hear about any software problems you have (and your solutions!) as you may not be the only practice experiencing the problem.



NEW LIQUID FORMULATION FOR ROTARIX®

A new liquid formulation of Rotarix® vaccine is now available on the NIP. The new formulation is an oral suspension of 1.5 mL in an ORAL applicator and is to be delivered in the same time frames as the existing powdered formulation.

That means the new liquid ORAL Rotarix® still has 2 doses:

- a) The first dose given at 6 to 14 weeks of age;
 - b) The second dose given at 14 to 24 weeks of age.
-

CHANGES TO MEDICARE AUSTRALIA'S ONLINE SERVICES

All practices should have received written advice about the changes to Medicare Australia's website.

The homepage has a health professionals tab, opening to the Health Professional Online Services site (HPOS).

The ACIR secure site can be accessed from the HPOS site - Logon box on the right hand side - using your existing authentication file name and password.

EDUCATION and TRAINING for nurses.

GSAHS IMMUNISATION UPDATE - Thursday 4th June 2009, Commercial Club Albury

All NSW accredited nurse immunisers must attend an annual update. Contact Kerry at the GP Network for registration form. For further information contact Alison Nikitas at GSAHS on Ph 02 60808900



INSIG 3rd Seminar - Friday 19th June 2009, Hilton Hotel Melbourne

Nurses with an interest in immunisation are invited to attend the seminar. Book early to avoid disappointment as INSIG seminars are very popular. Bookings close the 19th May 2009. For further details and to download an application, go to:

<http://www.anfvic.asn.au/sigs/>



RESOURCES - kfinlay@bordergp.org.au

Common Observed Reactions to Vaccines - I have ordered another box of these pads from GPNSW. They may be used by our NSW and VIC practices. If you would like another pad, please contact me.

Tetanus Prone Wounds Flowchart - Developed by SA Health, who have kindly agreed to share with GP NSW. I have laminated copies for every practice. If you have not already received your copy (given to PNs at their last meeting), or would like additional copies, please contact me.

Pertussis Vaccination poster - developed by Tweed Valley Division, who have kindly agreed to share with other divisions. I have laminated copies for every practice. If you have not already received your copy (given to PNs at their last meeting), or would like additional copies, please contact me.
