Regional Public Health
Better Health For The Greater Wellington Region

Facsimile Cover Sheet /Wharangi Nama Waea

Date/Te Ra: **24 August 2012**

To/Kia:	From/Na:
GP's, Practice nurses at Primary Care Centres, After-hours Centres, Wellington Free Ambulance staff, Pharmacists, the Emergency Department and Hospital Staff in the greater Wellington and Wairarapa regions.	Dr Annette Nesdale Medical Officers of Health Regional Public Health
Name of Agency/Wahi Mahi:	Fax Number/Nama Waea:

Public Health Alert Meningococcal Disease and Pertussis

I would be grateful if you could distribute the following information regarding meningococcal disease, pertussis and cryptosporidium to relevant staff in your organisation.

If you would also like to receive this by email for ease of distribution, storage and retrieval please advise RPH of your email on rph@huttvalleydhb.org.nz.

Kind regards,

Dr Annette Nesdale
Medical Officer of Health

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He ture no nga korero katoa kei roto o tenei karere, no reira, kia tupato. Mehemea kaore matau kaua e mau. Me whakamohiotia atu ki to Tari, me te mea nana I tono mai. E Tika Hoki.

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Date: **24 August 2012**

To: Practice nurses at Primary Care Centres, After-hours Centres, Wellington Free Ambulance staff, Pharmacists, the Emergency Department and Hospital Staff in the greater Wellington and Wairarapa regions.

From: Dr Annette Nesdale, Medical Officer of Health, Regional Public Health

Public Health Alert

1. Three cases of Meningococcal disease in the last 2 weeks
2. Whooping cough (Pertussis) update
3. Cryptosporidiosis update

1. Three cases of meningococcal disease

Regional Public Health (RPH) is reminding all health professionals to maintain a high alert for meningococcal disease. RPH has been notified of 2 confirmed cases last week; and a further case today. The ill people are a child aged 7 years and two young adults.

The 2 most recent cases are both dance students. One is a first year contemporary dance student at the NZ School of Dance and Drama Te Whaia in Newtown and the other attends the Whitiriea Performance Centre. Both students have been involved in rehearsals for the World of Wearable Arts show. Public health have followed up with these groups and provided advice and preventive antibiotics as appropriate to the close dance student and household contacts.

There is often a rise in meningococcal disease in late winter and early spring, especially following a lot of respiratory illness in the community.

Meningococcal disease can look like influenza or other winter illnesses in the early stages but rapid deterioration can occur very quickly. It is recommended to remind parents/ flatmates and friends to regularly check on people who are ill and have a plan for how to seek medical help, including overnight.

In the greater Wellington region there have been a total of 6 cases so far this year (2 cases of group B, 2 group C, 1 group Y and 1 result pending).

Pre-hospital or inter-hospital antibiotics
Two of the ill people went straight to the hospital Emergency Department and the other presented to the Wellington Accident and Urgent Medical Centre, was quickly triaged and given the appropriate antibiotics before transfer to Wellington Regional Hospital. Because of the fulminant nature of

meningococcal sepsis, antibiotics should be administered on suspicion of diagnosis and before transferring the patient to hospital or between two hospitals.

This recommendation particularly applies to those who are obviously ill and deteriorating quickly, and those with delirium, coma or a haemorrhagic rash. General practitioners need not be concerned that empiric penicillin will obscure the diagnosis for hospital clinicians.

Patients should receive treatment as follows:

- adults: benzylpenicillin 1.2 g (2 megaunits) IV (or IM); or amoxycillin 1–2 g IV (or IM)
- children: benzylpenicillin 25–50 mg/kg IV (or IM); or amoxycillin 50–100 mg/kg IV (or IM)
- another available parenteral antibiotic, such as a cephalosporin.

Reference: Immunisation Handbook 2011 page 287
http://www.moh.govt.nz/moh.nsf/Files/immunise-handbook/$file/16MeningococcalInvDisease.pdf

Meningococcal disease is notifiable on suspicion to the on-call Medical Officer of Health 04 570 9002.

Public Health response and follow up of meningococcal disease
RPH staff follow up people who were in close contact (mostly family and household) with cases of meningococcal disease during the infectious period. This includes providing preventive antibiotics and advice. We also provide advice and information to casual contacts who do not require antibiotics. Please refer any close contacts, or other contacts who are concerned, to RPH. Notification on suspicion supports early communication with family members and other close contacts who are understandably worried.

UPDATED RESOURCE. The Immunisation Advisory Centre (IMAC) have a Meningococcal Disease fact sheet for parents and caregivers, Appendix 1. This can also be accessed at www.immune.org.nz/sites/default/files/resources/DiseaseMeningococcalImac20120816V01Final.pdf

2. Whooping cough (Pertussis)

Pertussis continues to be high across the Wellington region, with a large resurgence of 91 cases notified in the last 3 weeks.

We are grateful for your continuing support to identify and mark on the fax notification form the priority people for public health follow up;

- Young babies< 12 months of age, especially if partial or incomplete vaccination
- Pregnant women, especially in last trimester
- People who work in early child education centres and health care workers including lead maternity carers
- Households with a baby <12 months or a pregnant women in last trimester who is **not** the case but at risk of infection
- Child attends a early child education centre

NEW Azithromycin for Pertussis cases and contacts aged less than 1 year
Azithromycin suspension has been approved on the pharmaceutical schedule by PHARMAC from 1 June 2012 for infants **under 1 year of age** who have Pertussis or are contacts.

The Ministry of Health advise the dosage for **infants under 1 year of age of** is;
10 mg/kg as a single dose on the first day followed by 5 mg/kg/day on days 2-5. Further information can be found on the medicine datasheet or through discussion with a local paediatrician.

The Ministry of Health may provide further information on azithromycin dosage in their next GP fax.

Immunisation
On time immunisation is very important during a sustained outbreak to protect those at greatest risk of severe disease, especially infants.

Pertussis immunisation

- 6 weeks, 3 months, 5 months (funded on national childhood schedule) for the primary course
- 4 years and 11 years for schedule boosters (funded)
- Boosters for adults who live or work with infants eg healthcare workers, education staff, pregnant women* (after 20 weeks) and other household members and carers of infants (not funded)
- Boosters should be considered for other people at high risk of severe disease e.g. someone who has underlying respiratory condition (not funded)

*Pertussis vaccination can be used in pregnancy, and is recommended to be given after 20 weeks gestation. Vaccination is important when there is a sustained outbreak in the community as it will boost the mothers immunity and is likely to provide some protection for the newborn. Confirmation of pregnancy should act as a trigger to check siblings have had their routine schedule vaccines and recommend a pertussis booster immunisation (unfunded) to all adult household members.

Attached is updated flow chart for management of suspected Pertussis in primary care.

3. Cryptosproidosis

Cryptosporidiosis cases are decreasing in the community however it is important to continue to remind children and adults **not** to swim in public swimming pools for 2 weeks after their diarrhoea has ended.

Attached:
Appendix 1: IMAC Meningococcal disease factsheet for parents and caregivers
Appendix 2: Flow chart for management of suspected Pertussis in primary care
Appendix 3: Pertussis fax notification form

Appendix 1: IMAC Meningococcal disease factsheet for parents and caregivers

Meningococcal disease

FactSheet For Parents and Caregivers

Immunisation Advisory Centre
ARAINGA MATE
THE UNIVERSITY OF AUCKLAND

What is meningococcal disease?

Meningococcal disease is caused by the bacterium *Neisseria meningitidis*. At least 13 groups have been identified and of these groups A, B, C, Y and W-135 are the most likely to cause disease in humans.[1-4] Patterns of infection differ throughout the world. In New Zealand groups B and C are most likely to cause disease.[5] Humans are the only host of these bacteria.[1,3]

How do you catch it?

Meningococcal bacteria are commonly carried in the nose and throat, and do not usually cause disease. The bacteria can be transferred from person to person through contact with saliva, e.g. intimate kissing.[2-4,6] Saliva on shared drink bottles or pacifiers (dummies) may also have a limited role in passing the bacteria from one person to another.[6,7] The bacteria may also be shared through droplets of saliva in the air from people coughing, sneezing or laughing.[2,4]

What are the symptoms of meningococcal disease?

The initial symptoms are difficult to distinguish from other infectious illnesses, e.g. influenza. Symptoms usually start and progress quickly, often within 24 hours. However, infants tend to have a more gradual onset than adults.[3]

Infants may have a fever, cry, appear unsettled, feed poorly, vomit, be sleepy or hard to wake, dislike bright light or have a rash or spots. They may have a bulging fontanelle.

Older children and adults may have a fever, malaise, nausea, vomiting, muscle aches and pains, drowsiness, headache, dislike of bright light, neck stiffness or have a rash or spots.

Almost 80% of cases will develop a rash that does not blanch (become pale/go white) when pressed on. This type of rash is often a late sign of infection.[1,13,14]

How serious is meningococcal disease?

If meningococcal bacteria pass into the blood, disease usually progresses very quickly. A person with meningococcal disease may develop:

- Meningitis (inflammation of the membranes around the brain).
- Septicaemia (blood infection).
- Pneumonia (lung inflammation).
- One to two people out of every 10 who survive meningococcal disease have long term complications, e.g. extensive skin scarring, limb amputation, hearing loss, seizures or brain injury.
- Even when the disease is identified and treated early, about one person out of every 10 will die.

Who is at risk?

Infants, children less than five years of age and adolescents have an increased risk of meningococcal disease.[1,2,8] Infants less than one year of age and children less than five years who are Māori or Pacific Peoples have the highest risk.[5]

Being exposed to tobacco smoke, living in a crowded household or having another respiratory infection, e.g. influenza, can increase a person's chances of carrying the bacteria.[1,9-11]

Some groups are also at increased risk of infection: household and other close contacts of someone with the disease, e.g. those who have been intimate or shared food and beverages, infants and children attending day care or an early childhood education centre, and adolescents and young people at boarding school or living in hostels.[1,12]

Some people with medical conditions that affect their immune system have an increased risk of infection, e.g. their spleen has been removed or doesn't work properly, and those who are immune compromised from a disease or treatment of a disease.

It is not clear why some people are vulnerable to the bacteria passing into their blood leading to disease.[4]

How do you prevent infection?

The risk of infection for household contacts of a person with the disease is highest during the first seven days and may persist for many weeks. Preventive antibiotics should be administered to close contacts as soon as possible, preferably within 24 hours of identification of the person with meningococcal disease.[4]

During an outbreak a meningococcal immunisation programme may be commenced for those in the highest risk groups if a vaccine is available. High numbers of people immunised with a type of meningococcal vaccine called a conjugate vaccine can protect individuals and also reduce the spread of disease. This is because the conjugate vaccine reduces the number of people carrying *N. meningitidis* contributing to 'herd immunity' whilst protecting the individual from invasive disease.

Which vaccines protect against meningococcal disease?

New Zealand only has one type of meningococcal vaccine free on the National Immunisation Schedule. This is for children aged 2-16 years of age whose spleen has been removed or doesn't work properly, and adults who are having/have had their spleen removed. However, when there is a disease outbreak a short-term meningococcal immunisation programme may be commenced for those in the highest risk groups if a vaccine is available.

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There are five vaccines available to purchase privately through your general practice. Three vaccines are conjugate vaccines; Menactra® protects against groups A, C, Y and W-135, and Meningitec® and NeisVac-C™ protect against group C only. Two vaccines are polysaccharide vaccines; Mencevax® ACYW and Menomune® ACYW-135 protect against groups A, C, Y and W-135. Talk to your nurse or doctor for more information.

The conjugate and polysaccharide vaccines work differently to generate protection against the bacteria. Protection from the conjugate vaccines lasts longer than that from the polysaccharide vaccines. The conjugate vaccines also generate long term memory cells allowing rapid boosting of immunity years later.

How safe are the vaccines?

More than 20 years of studies and safety monitoring have shown both the conjugate and polysaccharide meningococcal vaccines have excellent safely profiles. Common vaccine-related side effects are usually around the injection site and include soreness/pain, redness, and/or swelling. However, fever, headache, fussiness/irritability, drowsiness, nausea/vomiting or diarrhoea, or dizziness can also occur.[15-18]

The most serious reaction is a severe allergic reaction (anaphylaxis). The risk of this happening after meningococcal vaccination is less than once per million vaccine doses.[19]

How protective are the vaccines?

Protection against meningococcal disease is dependent on an individual having existing circulating protection provided by antibodies because the bacteria cause disease more quickly than the immune system can generate protection.

Immunisation generates circulating antibodies. Over time the antibody levels decrease. The number and quality of antibodies and how long they last depend on what type of vaccine is used, the meningococcal group(s) covered by the vaccine, and the age of the person receiving the vaccine.

There are no vaccines currently available in New Zealand that protect against meningococcal group B. However, new vaccines are in the process of being licensed overseas. A vaccine against a specific sub-group of meningococcal B, MeNZB™, was available in New Zealand between 2004-2011 in response to epidemic levels of this sub-group of B disease from 1991-2007. This vaccine is no longer available. The protection from this vaccine was not long lasting and those who received the MeNZB™ vaccine are not expected to still have immune protection against meningococcal B disease.

The conjugate vaccines generate better quality antibodies that last for longer than those generated by the polysaccharide vaccines. Older children, adolescents and adults are likely to have at least five years of protection after immunisation. Children less than six years of age are likely to have fewer years of protection, but the exact period isn't known.[20-22] However, the conjugate vaccines also generate immune system memory and a booster immunisation will rapidly generate more circulating protection.

The polysaccharide vaccines generate shorter-term circulating antibodies. They are only used for adults and children two years of age or older. Older children, adolescents and adults are likely to have between 3-5 years of protection after immunisation. Children less than five years of age when immunised are likely to have 2-3 years of protection.[4] The polysaccharide vaccines do not generate immune system memory. Studies have shown that repeat polysaccharide vaccine doses generate less circulating antibodies.[4]

Who should have meningococcal vaccine?

On the Pre/Post Splenectomy Immunisation Programme, children from aged 2-16 years of age whose spleen has been removed or doesn't work properly and adults who are having/have had their spleen removed are eligible for free Menomune® ACYW-135, the polysaccharide vaccine.

It is recommended that these groups have two doses of Menactra® before having Menomune® ACYW-135. However, Menactra® is not free and must be purchased privately through your general practice.

Meningococcal vaccine is also recommended, but not free, for:[19]

- Adolescents and young adults entering hostel type accommodation.
- Close contacts of a case of meningococcal disease.
- Those with medical conditions affecting their immune response, e.g. sickle cell anaemia, complement deficiency disease, HIV infection.
- Military recruits.
- Laboratory workers exposed to *N. Meningiditis*.
- Travellers to sub-saharan Africa.
- Hajj pilgrims.

Who should not have the vaccine?

Anyone with severe allergy (anaphylaxis) to a previous dose of the vaccine or any component of the vaccine should not receive the vaccine.

Immunisation should be postponed in subjects suffering an acute illness or high fever. The presence of a minor infection is not a reason to delay immunisation.

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Disease	Effects of disease	Side effects of the vaccine
Meningococcal disease is caused by the bacterium *Neisseria meningitidis* and can cause meningitis, septicaemia, long term complications or death.	• Meningitis (inflammation of the membranes around the brain). • Septicaemia (blood infection). • Pneumonia (lung inflammation). • One to two people out of every 10 who survive have long term complications, e.g. extensive skin scarring, limb amputation, hearing loss, seizures or brain injury. • Even when the disease is identified and treated quickly, about one person out of every 10 will die.	**Common side effects of vaccine** • Soreness/pain, redness and/or swelling around the injection site. • Mild fever. • Decreased appetite, nausea, vomiting and/or diarrhoea. • Irritability. • Headache. • Fatigue, malaise, drowsiness. **Uncommon side effects vaccine** • Dizziness. **Rare/very rare side effects of vaccine** • Anaphylaxis (severe allergic reaction). • Urticaria (allergic skin reaction).

Vaccines are prescription medicines. Talk to your doctor or nurse about the benefits or any risks.

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TAPS No. CH3392 DiseaseMeningococcalImac2012081601Final

GET THE FACTS ON IMMUNISATION
0800 IMMUNE
4 6 6 8 6 3

Appendix 2: Flow chart for management of suspected Pertussis in primary care

Flow Chart for the Management of a Suspected Pertussis Case in Primary Care

Possible Pertussis case
A highly transmissible disease with one or more of the following:
- Paroxysmal cough
- Cough ending in vomiting or apnoea
- Inspiratory whoop

NOTE – not all people will have the classical symptoms.

Notify all suspected and confirmed cases and advise if there are any priority people for follow up

Priority people for public health follow up
- Young babies <12 months of age, especially if partial or incomplete immunisation
- Pregnant women, especially last trimester.
- People who work at early childhood centres or healthcare workers including midwives
- Household with a baby <12 months or a pregnant woman in last trimester, who is **not** the case but at risk of infection
- Child attends an Early Child Education Centre

Who and When to test
If <7 days from cough onset a throat swab put in VTM may be taken for pertussis PCR. Culture and serology for pertussis are no longer recommended. Not all cases need laboratory confirmation but testing is particularly useful for managing vulnerable family, workplace or community contacts. Treatment should be commenced at the time of sample collection if the patient is seen early in the disease.

Is the case within three weeks of cough onset?

No

No treatment or exclusion is necessary, except pregnant* women in the last trimester where antibiotics should be considered even if cough onset was up to 6-8 weeks ago (refer Immunisation Handbook 2011 pg146)
Check and update vaccination, according to schedule, for all contacts to age 16 years (funded).
Discuss vaccination with adult contacts (unless they have received Tdap within 10 years) to protect against future exposure. Protection takes 10 -14 days to develop.

Yes

Antibiotics for pertussis case:
Antibiotic treatment is given to reduce Pertussis transmission, it may not alter the clinical course unless started in catarrhal stage.
- Treat with a 14-day course of Erythromycin*.
- If the person is not able to take Erythromycin, see pg 147 Immunisation Handbook 2011 for alternative antibiotics.
- Azithromycin suspension is available for infants under 1 yr of age

Exclusions
Exclude the case (for five days if prescribed antibiotics, or until three weeks post onset of symptoms if no antibiotics) from child care, school or work.

Contacts
Roxithromycin is better tolerated and appropriate to prevent infection in asymptomatic contacts**.
Azithromycin suspension is available for **infants under 1 yr of age.**

Prophylactic antibiotics should be considered for:
1. Everyone in the house if there is a household contact who is under 1 year who is not the case. This is to protect the under 1 year old.
2. Any pregnant woman in the last weeks of her pregnancy, if there is a case in the household.
3. Contacts at risk of severe disease e.g. immunocompromised, severe asthma, congenital heart disease- especially if partial or no immunisation.

Assess and treat as appropriate symptomatic household contacts.
Check and update vaccination, according to schedule, for all contacts to age 16 years (funded).
Discuss vaccination (not funded) with adult contacts (unless they have received Tdap within 10 years) to protect against future exposure. Protection takes 10 -14 days to develop.

Updated 24 August 2012
*Note that macrolides may cause infantile hypertophic pyloric stenosis in babies less than three months of age and macrolide use by pregnant and breastfeeding women has been reported to be associated with an increased risk of infantile pyloric stenosis.
** Local Infectious Diseases advice

Regional Public Health
Better Health For The Greater Wellington Region

Pertussis (Whooping Cough) Notification to Public Health

Name of notifying GP:	Practice:

CASE IDENTIFICATION

Name of case: Surname Given Names	Phone (home):
Current address: Number Street	Phone (work):
Suburb City	Phone (other):
Caregiver's name if case is child <16 years:	

CASE DEMOGRAPHY

Date of birth: / / Day Month Year	Ethnic group case belongs to (tick all that apply)
Sex: ☐ Male ☐ Female	☐ NZ ☐ Maori ☐ Chinese ☐ Samoan ☐ Indian ☐ Cook Is ☐ Tongan
NHI:	Other: (such as Dutch, Japanese, Tokelauan)

Preschooler: ☐ Yes: Name of Preschool:

School: ☐ Yes: Name of School:

Current occupation: | Name of workplace:

Please indicate priority people for Public Health follow-up:

- ☐ Young babies <12 months of age, especially if unimmunised
- ☐ Pregnant women, especially last trimester.
- ☐ People who work with young babies e.g. at early childhood centres or healthcare workers including midwives
- ☐ Household with a baby <12 months or a pregnant woman in last trimester, who is **not** the case but at risk of infection
- ☐ Child attends an Early Child Education Centre

Please advise patient of the diagnosis before notifying Regional Public Health

CLINICAL SYMPTOMS

Cough for more than 2 weeks	☐ Yes ☐ No ☐ Unknown
Paroxysmal cough	☐ Yes ☐ No ☐ Unknown
Cough ending in vomiting or apnoea	☐ Yes ☐ No ☐ Unknown
Inspiratory whoop	☐ Yes ☐ No ☐ Unknown
Illness onset date	/ / Day Month Year
Hospitalised ☐ Yes ☐ No ☐ Unknown	Date hospitalised: / / Day Month Year

TESTING

PCR	☐ Yes ☐ Awaiting results
Culture	☐ Yes ☐ Awaiting results
No testing required	☐ Yes
Contact with a confirmed case of Pertussis e.g. sibling, work colleague	☐ Yes ☐ No ☐ Unknown

Please attached a copy of the patients Pertussis immunisation history if known

PATIENT MANAGEMENT

Erythromycin for 14 days	☐ Yes
Other antibiotic: specify:	☐ Yes
No medication as patient has had cough for >21 days	☐ Yes
Exclude from work/school/childcare till 5 days of antibiotic, unless cough >21 days	☐ Yes

Notify RPH within 24 hours by Fax 04 570 9373 or email: healthprotection@huttvalleydhb.org.nz