Regional Public Health
Better Health For The Greater Wellington Region

Facsimile Cover Sheet /Wharangi Nama Waea

Date/Te Ra: **5 September 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.	Drs Annette Nesdale/ Margot McLean Medical Officers of Health Regional Public Health
Name of Agency/Wahi Mahi:	Fax Number/Nama Waea:

Public Health Alert Meningococcal Disease

I would be grateful if you could distribute the following information regarding the recent death from meningococcal disease 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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Regional Public Health
Better Health For The Greater Wellington Region

Date: 5 September 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

Meningococcal disease

Sadly, a 12 year old Wellington girl died of meningococcal disease late on Monday 4th September. The Public health follow-up of the girl's family and close contacts is mostly completed.

Public Health Nurses (PHNs) were at Evans Bay Intermediate School (EBIS) yesterday with the staff, pupils and some parents explaining the signs and symptoms of meningococcal disease; the importance of frequently checking on sick children and adults (including overnight); and how and when to seek medical help. The PHNs have identified and provided antibiotics to all the close family and household contacts (over 2 houses) and a small group of very close friends who attended a pizza party where there was a lot of sharing of drinks and close contact.

We are not aware of other people who require antibiotic prophylaxis at this stage. Please contact one of the communicable disease PHNs (04 570 9002) if someone who tells you they stayed overnight in the same household in the last 7 days (prior to 3 September) or had significant salivary contact e.g. kissing on lips and we will follow up with them.

Attached is a copy of the information letter that has been distributed to staff and pupils at Evans Bay Intermediate School (EBIS) in Wellington. **Note** that the laboratory tests have now confirmed it was meningococcal disease.

In the greater Wellington region there have been a total of 7 cases so far this year (2 cases of group B, 3 group C, 1 group Y and the result for the most recent is pending). There is no identifiable link between this recent case and the previous cases in August.

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

Appendix 1.

Regional Public Health
Better Health For The Greater Wellington Region

To: Students, Parents of Students and Staff at Evans Bay Intermediate School
4 September 2012

Contact with probable meningococcal disease

Very sadly a pupil at your school died yesterday. Meningococcal disease is the probable cause of the pupil's death, though this has not yet been confirmed by laboratory testing. **Please Note** that the laboratory tests have now confirmed it was meningococcal disease (5 September 2012).

Meningococcal disease is caused by bacteria that live in the back of the nose or throat and usually this does not cause disease. People who live in the same house as your student are being given antibiotics. The main purpose of the antibiotics is to treat people who may be carrying the bacteria in the back of the nose and throat and stop the spread of the disease. Antibiotics to eliminate carriage of the bacteria will not stop the development of the disease if someone is already developing the illness.

Other people **do not need antibiotics** unless there has been very close contact. The bacteria are usually only passed from person to person in very close contact, usually in the same household, such as by kissing. It is the contact with saliva, which is important. The bacteria do not live long outside the human body. While secondary cases (i.e. a second case in a family or other close group) occasionally occur, the bacteria are not passed readily from person to person like the flu or common cold.

Meningococcal Disease can be either meningitis (infection in the linings of the brain and spinal cord) or septicaemia (infection in the blood). The disease may start with a flu like illness, and then rapidly progress to a more serious illness with fever, headache, drowsiness, vomiting, stiff neck, a skin rash like blood spots under the skin, and sensitivity to bright lights.

In babies or children the illness may be more difficult to identify. Other symptoms in babies or children may include a fever, high pitched crying, generally being unsettled, refusing drinks or feeds, vomiting, being sleepy or floppy or hard to wake or a skin rash.

It can be very hard to tell meningococcal disease from the flu in the early stages. If you become unwell with a combination of these symptoms you should consult your doctor or After Hours Medical Centre urgently. Tell your doctor about your contact with meningococcal disease. I suggest you take this letter with you.

Our thoughts are with you all and your school community at this very sad time.

Carolyn Cranney
Public Health Nurse
for Medical Officer of Health
REGIONAL PUBLIC HEALTH

Further public health advice:

Service	Contact details ☎	Comment
Regional Public Health	Office hours (8am to 5pm) 04-570-9002 RPH After hours 04 570-9007	Most enquiries about the public health follow up are best answered by the Public Health communicable disease nurse team in office hours Urgent enquiries about the public health follow up. Ask to speak to the on-call person for meningococcal disease at Regional Public Health
Healthline	0800 611 116 for free 24-hour health advice	Healthline is a free telephone health information service for all the family. The service is staffed by registered nurses who will assess your health needs, and give information and advice.
Ministry of Health	www.moh.govt.nz	Further information available on this useful website

Appendix 2: IMAC Meningococcal disease factsheet for parents and caregivers Appendix 1: IMAC Meningococcal disease factsheet for parents and caregivers

Meningococcal disease

FactSheet For Parents and Caregivers

Immunisation Advisory Centre
ĀRAINGA 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.

Meningococcal disease

FactSheet For Parents and Caregivers

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.

Meningococcal disease

FactSheet For Parents and Caregivers

Immunisation Advisory Centre
Ārainga Mate
The University of Auckland

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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Factsheet accessible at
www.immune.org.nz/sites/default/files/resources/DiseaseMeningococcalImac20120816V01Final.pdf