Regional Public Health
Better Health For The Greater Wellington Region

Facsimile Cover Sheet

Wharangi Nama Waea

Date/Te Ra: **20 September 2013**

To/Kia: General Practitioners, Practice Nurses, Paediatricians, ID Physicians, Pharmacists, After-hours Centers and Emergency Departments in the greater Wellington and Wairarapa region	**From/Na:** Dr Annette Nesdale

Public Health Alert

Meningococcal disease – 2 cases in the last week

I would be grateful if you could distribute the following information 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

Regional Public Health
Better Health For The Greater Wellington Region

Public Health Alert

Date: **20 September 2013**

To: **General Practitioners, Practice Nurses, Paediatricians, ID Physicians, Pharmacists, After-hours Centers and Emergency Departments in the greater Wellington and Wairarapa regions**

From: **Dr Annette Nesdale**

Meningococcal disease – 2 cases in the last week

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 in the last 7 days. One is a primary school aged child and the other a young adult at university. One is due to group B and the other group C meningococcal disease. Both live in Wellington but are not known to each other and there are no links between them. This makes a total of 4 people with meningococcal disease in the region this year. There is often an increase in meningococcal disease in spring, following a lot of respiratory illness in the community.

Information has been sent to schools, early child education centres and tertiary institutions to share with their families on the signs and symptoms of meningococcal disease (attached).

The information to tertiary students also included the recommendation for immunisation (not funded) against group C meningococcal disease for young people living in hostels or other similar shared living accommodation (NZ Immunisation Handbook 2011 page 300). In the past 3 years there have been on average 12 people in the Wellington region with meningococcal disease each year and 3 to 4 of these each year will have been caused by meningococcal group C. Information about the different vaccines is included in the attached IMAC fact sheet.

Regional Public Health
Better Health For The Greater Wellington Region

19 September 2013
MENINGOCOCCAL DISEASE -IMPORTANT HEALTH INFORMATION
SCHOOLS and EARLY CHILDHOOD EDUCATION CENTRES

In the last week there have been two people ill with meningococcal disease in the Wellington region, a primary school pupil and a university student. We often see an increase in meningococcal disease in spring and when there is a lot of respiratory illnesses in the community. Now is a good time to make sure you are aware of the signs of meningococcal disease and when and how to seek medical help.

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 progresses 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

Remember that it can be very hard to tell meningococcal disease from other illnesses in its early stages so check on sick people frequently. If a sick person has the symptoms above or you are worried call Healthline 0800 611 116 for free health advice from registered nurses, 24 hours a day, or contact your Doctor or an after hours medical centre urgently.

The following steps will help prevent many types of illnesses from being spread in our community apply these:
Prevent the spread of germs by making sure everyone covers their mouth and nose with tissues when coughing and sneezing and put used tissues in a covered bin or a plastic bag. If there are no tissues available, cough or sneeze into your upper sleeve – not your hands. Remember to always wash your hands afterwards.
Encourage everyone to wash their hands regularly. Clean hands are the single most important factor in preventing the spread of germs. Wash hands for at least 20 seconds with soap and warm water and dry them for 20 seconds with a dry towel or paper towel, or use an alcohol-based hand rub. Hands should be washed before preparing food and eating,after coughing, sneezing, blowing your nose, or visiting the toilet.

Please share this letter and the attached meningococcal disease fact sheet with your families. You can also contact a School Public Health Nurse or the Disease Control Public Health Nurses on 570 9002 or you can telephone IMAC on 0800 IMMUNE (0800 466863) for further information on vaccination.

Yours sincerely

Dr Annette Nesdale
Medical Officer of Health

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

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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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