Public Health Quarterly

Pertussis (whooping cough) in Auckland

Author: Dr Andrew Lindsay, Medical Officer of Health.

Over the last few months there has been an increase in the number of cases of pertussis across the Auckland Region. From 1 January 2012 to 25 May 2012 there have been 274 confirmed and probable cases. The rate of pertussis in infants under 12 months is currently 3.9 per 1000. This is 12 times higher than in 2006/2007. Rates are highest in Maori and Pacific infants.

Pertussis is especially serious in young infants with the associated risks of severe complications and death. The illness is often milder and may be less classical in presentation in older children and adults. On time immunisation offers the best protection for young infants who can also be indirectly protected via immunisation of front-line health professionals, older siblings, and adults in families expecting a new baby.

Key messages for your patients:

► On-time immunisation in childhood.
► Consider immunisation in pregnancy (Boostrix).
► Keep coughs away from babies.

► For more detailed health professional advice on pertussis see: www.arphs.govt.nz/health-information/health-professionals
► The Immunisation advisory centre (IMAC) also offers excellent advice on pertussis and immunisation: www.immune.org.nz/diseases/pertussis
► The immunisation handbook provides clinical guidelines for health professionals on the safest and most effective use of vaccines in their practice: www.health.govt.nz/publication/immunisation-handbook-2011
► Health Ed offers a wide array of resources on pertussis and immunisation that are available in many languages: www.healthed.govt.nz

To notify Auckland Regional Public Health Service
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What you can do....
► Please notify pertussis cases on suspicion
► Investigate, treat and isolate suspected cases and contacts early
► Ensure on-time immunisation for infants at six weeks, three months and five months. Only 72% of infants in the Auckland Region are fully immunised at six months, with lower coverage for Māori (53%) and Pacific (68%) infants
► Discuss the increase of pertussis with expectant parents and parents of newborns and their options for protecting their children.

For more information on pertussis or to notify a suspected case call 09 623 4600 (ARPHS 24 hour phone line).
Auckland’s Recent Legionellosis Outbreak: Your Questions Answered

Author: Dr. Simon Baker, Medical Officer of Health, and John Whitmore, Health Protection Officer.

1. What’s the Latest Update?

Auckland Regional Public Health Service (ARPHS) is currently managing an outbreak of Legionnaire’s disease in the Auckland region caused by Legionella pneumophila serogroup 1, or LP1. This type of Legionella bacteria is commonly found in water particles and cannot be transferred person to person. It is not normally associated with compost, soil or potting mix. As yet no specific site of contamination has been identified, and because confirmed cases are located throughout the Auckland region, locating the source or sources is difficult.

There has been an increase in local doctors seeing patients concerned about Legionnaire’s disease because of a general misunderstanding about what it means when a workplace or building with cooling towers are shock-dosed to eliminate Legionella. There have been no outbreaks in any buildings or workplaces. If a patient presents fearing Legionella disease, it is important to reassure them that no building has been identified as the source of this outbreak.

We have 16 cases in this current outbreak as of 28 May 2012. This equates to a rate of 3 per 100,000 per year in the Auckland region, so the illness is not common. It is one of the less common causes of pneumonia.

2. What is Legionnaires’ Disease?

Legionnaire’s disease is a type of pneumonia, usually requiring hospital admission. It presents with symptoms and signs of pneumonia. The incubation period is 2 to 14 days, typically 5 to 6 days. Legionnaires disease is not a cause of chronic or persistent cough. Legionella testing is not indicated in this situation.

3. When should I test for Legionnaire’s Disease?

- Hospitalised patients with atypical pneumonia
- Immune compromised patients with pneumonia
- Patients with pneumonia in the setting of a Legionnaires’ disease outbreak.
- Patients with pneumonia who fail to respond to treatment to a β-lactam or cephalosporin
- Patients with a travel history and symptoms of pneumonia
- Patients suspected of nosocomial pneumonia with unknown aetiology.

4. Which tests should I use?

Serology is not a reliable test for Legionnaire’s disease. For people who fit the case definition for Legionnaire’s disease, the legionella urinary antigen test (LUA or UAT) is the test of choice for this particular serogroup (Legionella pneumophila serogroup 1, or LP1). Sputum for culture is also extremely helpful. If you do request legionella serology, any that screen positive at a local laboratory will be forwarded to the legionella reference laboratory at ESR in Wellington for further analysis. This may take several weeks for even an initial result. Two specimens, taken at least three weeks apart, are required to make a definitive diagnosis. If you do request serology, it is most helpful if the first test is taken as soon as possible in the illness.

5. Where can I go for more Information?

For media releases, latest news and information for health professionals visit the ARPHS website: www.arphs.govt.nz

If you have any concerns that are not covered by this information, please call 09 623 4600 (available 24 hours) and ask for the Assessment Management Team (AMT) Medical Officer (business hours) or the On Call Service (after hours).
Disease Surveillance Summary
Authors: Dr. William Rainger, Public Health Physician and Dr. Bruce Adlam, Medical Officer, Communicable Disease.

Quarterly Surveillance Commentary 1/1/12 to 31/3/12

**Hepatitis A**
There were 49 cases of Hepatitis A for the first quarter of 2012 (January to March), compared to 3 cases for the same time period last year. This increase was due to 30 cases of Hepatitis A that were related to a large cluster of disease likely due to several importations of disease with subsequent person-to-person transmission.

**Gastroenteritis/food borne intoxication**
There were 11 cases of Gastroenteritis/food borne intoxication for the first quarter of 2012 (January to March), compared to 5 cases for the same time period last year, which represents a 120% increase likely due to random variation.

**Pertussis**
So far this year 274 confirmed or probable cases of pertussis (whooping cough) have been notified to ARPHS. This is consistent with outbreaks in many other parts of New Zealand and significantly more notifications than in the first quarter of 2011.

**Legionellosis**
There has been an outbreak of Legionnaire’s disease caused by * legionella pneumophila serogroup 1* (Lp1) in the Auckland region since mid-February. The outbreak is being managed by ARPHS in conjunction with Auckland Council.

**Measles**
Although there have been fewer cases of measles in the first 3 months of 2012 the outbreak that started in May 2011 has continued, with a higher number of cases than was associated with a different outbreak in early 2011. Health professionals are reminded that the management of measles is unchanged from that published on the ARPHS website and Health Link in late 2011, the key features being:

- Please notify ARPHS on when you suspect measles based on clinical presentation and before you receive laboratory confirmation. You don’t need to get laboratory confirmation where there are clear symptoms consistent with measles illness and the person has a clear link within the last 3 weeks to a confirmed case of measles.
- Provision of information to cases, caregivers and their contacts via factsheets on the ARPHS website.
- The first MMR dose at 12 months, with the second MMR dose earlier than 4 years of age (any time one month or more after the first).
- Opportunistic immunisation with MMR of anyone born since January 1969 who has not had two doses of measles containing vaccine.

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Lead poisoning and Chelation Therapy

Author: Dr. Denise Bamf father, Medical Officer of Health.

Lead poisoning is a medical condition caused by an increased level of lead in the body. Lead interferes with normal body functioning, and is toxic to many organs and tissues such as heart, bone, intestines, kidneys, and reproductive and nervous systems. The negative effect of lead on development of the human nervous system is of particular concern. Children are more vulnerable to lead poisoning than adults and may suffer permanent neurological damage. High lead levels damage neurological and other developing systems in the unborn child (1).

 Symptoms
The symptoms of lead poisoning may go unnoticed until blood lead levels are very high because they are very common and non-specific.

 Symptoms can include the following:
► Effects on the brain – mood change (depression, irritability), memory loss, sleep disturbance, headaches, difficulty concentrating, tingling and numbness in fingers and hands
► Effects on the digestive system – lack of appetite, nausea, diarrhoea, constipation, stomach pains and weight loss
► Other effects – kidney damage, reduction in sperm quality and number, miscarriage and anaemia.
► In severe cases, people can suffer convulsions, coma, delirium and eventually death.

At lead levels above 3.8 μmol/L serious and permanent health damage may occur.

Causes of Lead Poisoning
In Auckland, the most common causes of lead poisoning from domestic and recreational use are; indoor shooting, casting of lead bullets, fish sinkers, diving weights, paint-stripping on houses built pre-1980s, and consumption of herbal and Ayurvedic medicines which contain lead. Non-occupational poisoning (blood levels 0.48μmol/L) is investigated by the public health service.

In the workplace, there may be various exposures to lead. Cases of occupational lead poisoning are investigated by the Department of Labour. Examples of occupations where lead exposure may occur include: painting, smelting, plumbing, panel beating, battery manufacture, soldering, and radiator repairs.

Public Health Action
Lead poisoning is considered a notifiable disease under the Health Act 1956 legislation. This means that the laboratory results for all patients with lead poisoning demonstrated by a blood test (≥0.48μmol/L) are sent to the Medical Officer of Health for public health action.

Public health action generally consists of:
► Completing a questionnaire to determine any ongoing exposures that may have been responsible for the patient’s lead poisoning
► Carrying out any further investigations required to determine and assist in the management of the environmental source.
► Contacting the Department of Labour when occupational exposure is identified.

Resources and Information
► To order resources from ARPHS, phone: 09 623 4600 ext. 27188
www.arphs.govt.nz/links/resources-centres
► More information for Health Professionals
www.arphs.govt.nz/health-information/health-professionals

What is Chelation Therapy?
Chelation may be performed to remove toxic levels of lead from the body. Patients diagnosed with very high lead levels may need immediate intravenous chelation therapy administered in a hospital setting, while patients with lower lead levels may be given oral chelation therapy. A chelating chemical is able to attach or bind onto certain metals and, when used therapeutically, remove them from the body via excretion in the urine and faeces. The chemical commonly used to remove lead is known as ethylenediaminetetraacetic acid (EDTA), represented diagrammatically above.

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