

COMMUNICABLE DISEASES

For general practitioners and practice nurses

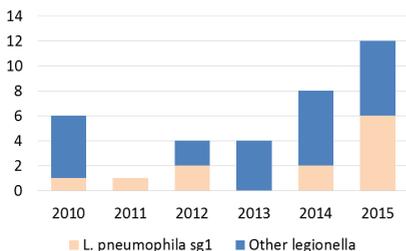
Outbreak Of Legionnaires' Disease:

In April–May of this year six cases of Legionnaires' disease due to *Legionella pneumophila* serogroup 1 (LPSG1) were notified in Christchurch (fig. 1). All required hospitalisation and all recovered.

On investigation it was found that cases either lived, worked, or visited within 1–2 kilometers of an evaporative condenser contaminated with LPSG1 that was situated in the Hillsborough industrial area. This unit however was not the source of illness for two cases who became unwell after the evaporative condenser was cleaned and disinfected.

After industrial premises in the area were requested to sample, clean and disinfect cooling towers and evaporative condensers there were no more notifications.

Figure 1. Christchurch cases of legionellosis due to *L. pneumophila* sg1 and other serotypes: April - May, 2010–2015



Other aerosolised water sources of LPSG1 include commercial air conditioning using cooling towers, domestic showers, spa pools and decorative fountains. In New Zealand

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(but not in other developed countries) the commonest cause of Legionnaires' disease is *L. longbeachae* from inhalation of dust from potting mix/compost.

The other form of legionellosis, Pontiac fever, is a self-limited illness accompanied by cough that doesn't lead to pneumonia or death and may be related to the inhalation of legionella antigen rather than bacterial invasion.

Evaluation of a possible case of Legionnaires' disease

- Refer to HealthPathways/Community acquired pneumonia (CAP) in adults, for guidelines on assessment and management. The practice point states: "CAP can be difficult to diagnose and has a significant mortality in some patients. An important decision for general practitioners is whether to manage a patient with CAP in the community or refer for acute admission."

This involves an assessment of the severity of the presenting illness, co-morbidities, and social circumstances. The CRB-65 severity assessment tool assists with the management decision.”

- ii) To prevent legionella growing in hot water cylinders the storage temperature must be at least 60°C. However to prevent scalding, the temperature at the tap must not exceed 55°C (40°C in early childhood educational facilities). These temperature reductions are achieved by means of tempering valves.

Yersiniosis Elevated In Canterbury

The weekly incidence of yersiniosis notifications in Canterbury has been elevated (average of 2-3 cases per week compared with 1-2 usually) since the start of the year (fig. 2) largely due to biotype 1A (fig. 3). The cause of the increase is currently unknown but is being investigated.

It is not considered to be related to the outbreak last August when 220 cases nationally were affected. In that outbreak due to *Y. pseudotuberculosis*, the source was believed to be contaminated bagged lettuce and possibly carrots, from the North Island. In the last four years South Canterbury has averaged nine yersiniosis notifications per year and West Coast four.

Figure 2. Yersiniosis notifications in Canterbury, August 2014—June 2015

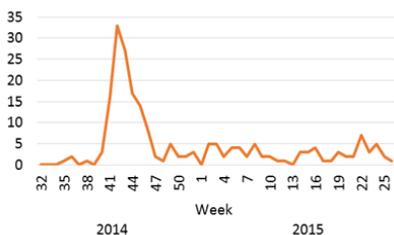
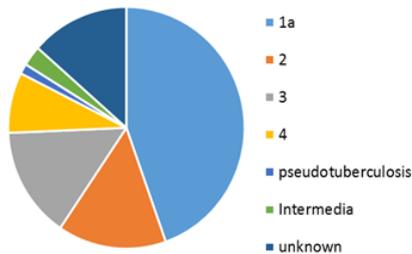


Figure 3. Yersinia biotypes in Canterbury, January– June 2015



Practice points:

Risk factors

- Ingestion of contaminated food, including pork products, unpasteurised dairy products, fruit, vegetables, tofu, untreated water, direct contact with an infected animal (wild and domesticated animals and birds), and person-to-person spread.
- *Yersinia* grows well at refrigerator temperatures (4°C) and survives freezing.

Presentation

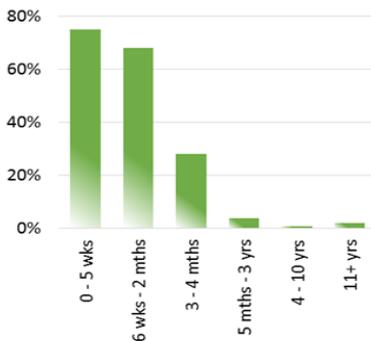
- Children under 5 years old with *Y. enterocolitica* infection typically present with diarrhoea, vomiting, fever and occasionally abdominal pain.
- Older children and adults are more likely to experience abdominal pain as the prominent symptom.
- Bacteraemia and sepsis may occur in immunocompromised individuals.
- *Y. pseudotuberculosis* is more likely to cause mesenteric adenitis. (mimicking appendicitis) and septicaemia than *Y. enterocolitica*.
- *Yersinia* spp. have rarely been transmitted by blood transfusion (patients with yersiniosis are not to donate blood for three months, and then to discuss with the Blood Bank before doing so).

Pertussis Circulating

A recent outbreak of pertussis at a Christchurch high school is a timely reminder of the importance of vaccination. The currently funded immunisation schedule includes a three dose primary vaccination course for infants under one year and boosters at age four and 11 years, and in every pregnancy (between 28 and 38 weeks gestation).

Pertussis is highly infectious and is most severe in children aged less than 1 year (fig. 4). Eight deaths occurred in New Zealand between 1997 and 2013 including two 1 month old infants.

Figure 4. Percentage of notified South Island pertussis cases requiring hospitalisation, 2009-2013



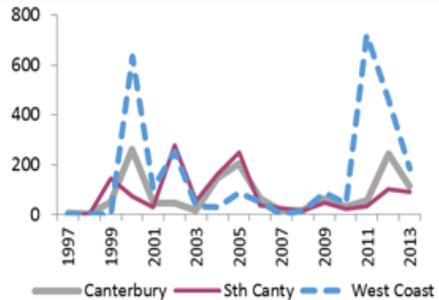
Epidemics occur every 3-5 years. The most recent lasted approximately 30 months in the C&PH region and ended in December 2013. Between major epidemics there may be months with elevated pertussis activity (fig. 5).

Antibiotics do not alter the clinical course unless started early on in the catarrhal phase, but do reduce the length of the infectious period.

The vaccine has been shown to have an efficacy of approximately 84% after

a primary vaccination course in infancy. Immunity wanes relatively rapidly but may last up to six years.

Figure 5. Annual pertussis rates in the C&PH DHBs 1997-2015.



Practice points:

- Pertussis is at or above epidemic levels almost 50 percent of the time and the best prevention is on-time vaccination.
- Booster vaccination is recommended and funded for every pregnancy between 28 and 38 weeks gestation.
- Booster vaccination is recommended (but not funded) for early childhood workers and healthcare workers in contact with infants.
- New-born infants should be protected against pertussis by encouraging family contacts to have booster vaccinations, a strategy known as 'cocooning'.
- Antibiotics will reduce infectivity (after five days of appropriate treatment the patient will be non-infectious) but will only alter the clinical course of the illness if started in the catarrhal phase.
- Appropriate testing depends on the date of onset of symptoms. A dry nasopharyngeal swab for PCR is recommended up to four weeks after the onset of the illness. After this time, serology is done.
- Notify on suspicion.

Transferred Rheumatic Fever Patient

Details of any patient with a history of rheumatic fever who requires or is taking a prophylactic antibiotic, and who transfers to our region should be

forwarded to a Communicable Diseases nurse in the Christchurch office to ensure that he/she is included on the RF register and receives optimal medical and dental care.

Summary Of Selected Notifiable Diseases By District Health Board April—June 2015 And 2014

	Canterbury		South Canterbury		West Coast		TOTALS	
	Cases Apr-Jun 2015	Cases Apr-Jun 2014						
Enteric Diseases								
Campylobacteriosis	138	164	19	43	11	8	168	215
Cryptosporidiosis	9	17	1	1	-	1	10	19
Gastroenteritis	9	8	-	-	-	2	9	10
Giardiasis	30	45	2	5	3	-	35	50
Hepatitis A	-	1	-	-	-	-	-	1
Listeriosis	-	-	-	-	-	-	-	-
Paratyphoid	-	-	-	-	-	-	-	-
Salmonellosis	31	32	5	5	1	1	37	38
Shigellosis	5	-	-	1	-	-	5	1
Typhoid	-	-	-	-	-	-	-	-
VTEC	4	8	3	4	1	-	8	12
Yersiniosis	37	16	1	1	1	1	39	18
Other Diseases								
Dengue Fever	-	1	1	-	-	-	1	1
Haemophilus influenzae b	-	-	-	-	2	-	2	-
Hepatitis B	1	3	-	-	-	-	1	3
Hepatitis C	4	2	-	-	-	-	4	2
Lead absorption	-	-	-	-	-	-	-	2
Legionellosis	16	10	1	-	1	2	18	12
Leptospirosis	2	1	1	-	-	1	3	2
Malaria	1	-	-	-	-	-	1	-
Measles	-	-	-	-	-	-	-	-
Meningococcal Disease	1	-	-	-	-	-	1	-
Mumps	-	-	1	-	-	-	1	-
Pertussis	30	17	1	2	-	2	31	21
Pneumococcal Invasive Dis	8	16	-	1	1	1	9	18
Rheumatic fever (initial attack)	1	-	-	-	-	1	1	1
Rubella	-	-	-	-	-	-	-	-
Tuberculosis (new case)	11	3	-	-	-	-	11	3