Canterbury District Health Board
MEDICAL OFFICERS OF HEALTH

Public Health Information Quarterly

COMMUNICABLE DISEASES

For general practitioners and practice nurses

July 2018

Contents

Community and Public Health
Canterbury
District Health Board
Te Poari Hauora o Waitaha

South Island-wide measles outbreak

In early April Community & Public Health was notified by a general practice and by Christchurch Hospital of two cases of measles. Public health staff contact all measles cases immediately to investigate the source of infection and to limit its spread. Questioning of these two cases revealed that both had flown from Queenstown to Christchurch on the same flight. The resulting outbreak investigation identified sixteen connected cases of measles across the South Island.

Figure 1 shows transmission between the Canterbury cases in this outbreak. Of the nine Canterbury cases, three were hospitalised. Only three cases reported being fully vaccinated, and only one could provide a documented vaccination history.

Measles is highly infectious by airborne spread or by direct contact with nasal or throat secretions. Virus can persist in the environment for up to 2 hours.

Disease in contacts may be prevented by vaccination of susceptible contacts with MMR within 72 hours of exposure or by passive immunisation with immune-globulin if 3 to 6 days after exposure.

Measles practice points

- offer MMR to non-immune patients
- consider the diagnosis (and look for Koplik spots) in suspected cases, especially children, with symptoms
- request serology and a naso-pharyngeal swab for PCR to confirm the diagnosis
- notify on suspicion
- inform C&PH of possible susceptible contacts who require immune globulin.

Other public health preventive measures include isolation of cases and exclusion of susceptible contacts from high-risk settings. Prompt notification helps contain measles spread.

The primary case in this outbreak was never identified but is assumed to have flown from Queenstown to Christchurch on 22 March. The outbreak was declared over in June, but it has provided a reminder both of the serious nature of measles infection, and of the number of susceptible people remaining in our community.

MMR vaccination should be offered to any patient who does not meet at least one of the following:

- born before 1969 (when measles vaccine was introduced)
- confirmed measles infection in the past

Community & Public Health

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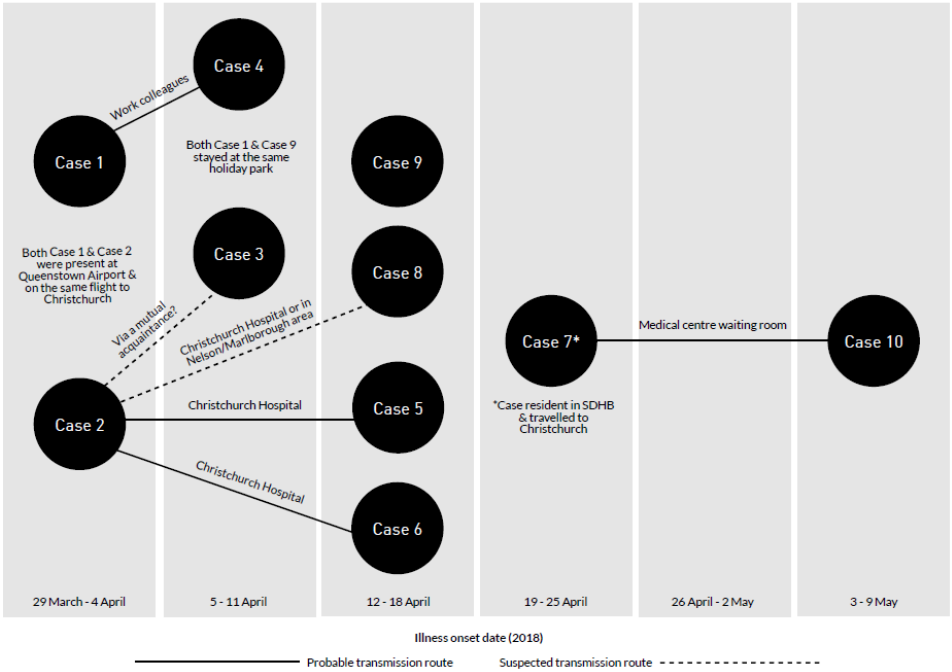
Figure 1. Transmission between confirmed measles cases in Canterbury during April 2018 outbreak (OB-18-107554-CH)



- documented vaccination with two doses of MMR vaccine
- documented immunity to measles.

Christchurch Airport: Exercise Micro

Preventing infectious diseases from entering the country is a public health role dating back many centuries. Public health staff have legal powers to assess, isolate and quarantine incoming international travellers.

On 13 June, Community & Public Health staff took part in a multi-agency emergency preparedness exercise at Christchurch International Airport. The exercise involved 99 staff from 11 different agencies and took place over three locations: a bus (simulating an aircraft), an access corridor at an international arrivals gate (simulating the arrivals hall) and the airport Emergency Operations Centre. The exercise scenario described a fictitious incoming flight from Singapore with several unwell passengers on board, in the context of overseas outbreaks of novel influenza.

Past real-life responses at Christchurch airport range from assessment of individual sick passengers to full-scale screening and assessment for all international flights during the “keep it out” phase of the 2009 influenza pandemic.

Emergency exercises provide an opportunity to practice and test procedures, and to strengthen relationships with other agencies. Lessons learned in Exercise Micro will enhance our readiness for future real events.

Three new cases of rheumatic fever

Rheumatic fever is an autoimmune consequence of a group A streptococcal throat infection. The incidence of rheumatic fever in New Zealand is much higher than in comparable countries and regions. New diagnoses have previously been unusual in the South Island, but three new cases of acute rheumatic fever were notified in Canterbury in April-June.

Most cases of acute rheumatic fever are in children aged 5-14 years, although about one third of cases occur in older teens and young adults. Diagnosis is clinical, based on the Jones criteria (major = carditis, polyarthritis, chorea, erythema marginatum, subcutaneous nodules; minor = fever, raised ESR or CRP, polyarthralgia, prolonged PR interval on ECG).

Early diagnosis and treatment of acute rheumatic fever reduces the risk of severe rheumatic heart disease. All suspected cases should be notified to the Medical Officer of Health and referred to hospital for specialist assessment, investigation, education and treatment, which includes long-term antibiotic prophylaxis to prevent recurrent attacks. Regular long-term follow-up of confirmed cases is fully funded in primary care.

Jones criteria: acute rheumatic fever

- Major manifestations
  - ⇒ Carditis
  - ⇒ Polyarthritis
  - ⇒ Chorea
  - ⇒ Erythema marginatum
  - ⇒ Subcutaneous nodules
- Minor manifestations
  - ⇒ Fever
  - ⇒ Raised ESR or CRP
  - ⇒ Polyarthralgia
  - ⇒ Prolonged P-R interval on ECG

Early detection and treatment of group A streptococcal throat infections helps reduce the incidence of acute rheumatic fever.

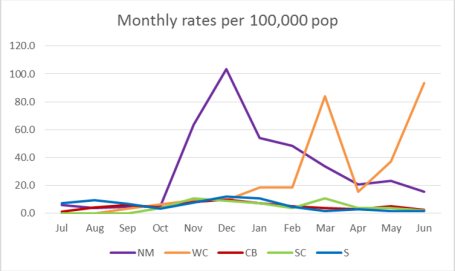
National increase in meningococcal disease

From 1 January to 19 June 2018 there were 41 cases of meningococcal disease notified nationally, an increase on the same period in previous years (2017: 30 cases, 2016: 21 cases, 2015: 12 cases, 2014: 19 cases). ESR has identified an increase in group W disease, with ten cases so far this year compared to 0-2 cases in previous years. Three of these cases were in Canterbury. Clinical illness tends to be more severe in group W disease, and patients may have atypical presentations leading to late diagnoses.

Pertussis

The overall decline in pertussis notifications has continued across the South Island this year (figure 2)

Figure 2: SI DHB pertussis rates 17-18



Summary of Selected* Notifiable Diseases by District Health Board
April—June 2018 and 2017

	Canterbury		South Canterbury		West Coast		TOTALS	
	Cases April-June 2018	Cases April-June 2017	Cases April-June 2018	Cases April-June 2017	Cases April-June 2018	Cases April-June 2017	Cases April-June 2018	Cases April-June 2017
Enteric Diseases								
Campylobacteriosis	121	136	25	23	10	5	156	164
Cryptosporidiosis	23	30	-	2	3	1	26	33
Gastroenteritis	15	7	-	-	1	1	16	8
Giardiasis	42	44	8	11	-	2	50	57
Hepatitis A	-	-	-	-	-	-	-	-
Listeriosis	1	-	-	-	-	-	1	-
Paratyphoid	-	1	-	-	-	-	-	1
Salmonellosis	38	39	2	6	2	1	42	46
Shigellosis	2	5	1	-	-	1	3	6
Typhoid	3	1	-	-	-	-	3	1
VTEC	2	12	3	5	1	-	6	17
Yersiniosis	14	32	1	3	1	-	16	35
Other Diseases								
Dengue Fever	2	6	-	1	-	-	2	7
Haemophilus influenza b	-	--	-	-	-	-	-	-
Hepatitis B	-	-	-	-	-	-	-	-
Hepatitis C	3	-	-	-	-	-	3	-
Invasive Pneumococcal dis.	9	7	1	2	-	-	10	9
Lead absorption	-	-	-	-	-	-	-	-
Legionellosis	10	7	-	-	-	1	10	8
Leptospirosis	5	6	-	1	-	1	5	8
Malaria	-	-	-	-	-	-	-	-
Measles	9	1	-	-	-	-	9	1
Meningococcal Disease	4	3	-	-	-	-	4	3
Mumps	2	3	1	-	-	-	3	3
Pertussis	50	32	5	1	47	3	102	36
Rheumatic fever (initial attack)	3	1	-	-	-	-	3	1
Rubella	-	-	-	-	-	-	-	-
Tuberculosis (new case)	3	2	1	-	0	-	4	2

* Other notifications: 1 Ross River virus (Canterbury)