Medical Officer of Health
Public Health
ADVICE

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Management of Enteric Infections

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Management of enteric infections

This note is to update primary care on management and public health follow up of enteric notifications. The annexes provide reference materials on exclusion, clearance and incubation periods.

Trends in Enteric Disease

Enteric infections are the most common notifiable diseases, and several are increasing in incidence. The increase in STEC (Shiga toxin producing *E.coli*) has resulted from change to PCR testing, instead of culture. However, this is not the case for most other infections. Since January 2018 in Hawke's Bay, SCL uses PCR testing for all enteric pathogens except Yersinia. The Hospital lab (serving Wairoa and Central) does not use PCR for routine tests.

Primary care actions for enteric notification

The Ministry of Health updated its guidance on public health follow-up of cases and contacts. (Summarised in Annex 1 for your information). We remind you that the key action for primary care is to **advise any patient with gastroenteritis to stay off work/school/early childhood education centre until 48 hours after symptoms have ceased.** And to avoid swimming for 2 weeks after cessation of symptoms

All health practitioners are required to notify a notifiable disease on **suspicion**. For enteric infections, the notification is usually made by the laboratory. But laboratory notification does not provide key information for public health follow-up, including exposures, other cases and sources and whether they or their contacts are 'high-risk' (as defined in Annex 1). You do not need to notify a positive enteric test, if there are no risks.

Please notify any case of gastroenteritis (with or without a test result) who may infect others or be part of an outbreak. If you requesting a stool sample, please advise the patient that public health will contact them if a notifiable organism is found.

In some practices a specialised eReferral form (eGP) is available to send notification details electronically. It is hoped this technology will be available more widely later this year.

New process for follow-up of notified cases

Starting with Campylobacter notifications, we are sending an SMS to the case (or their caregiver) to request completion of an e-questionnaire on possible sources and risks. This means they will be getting their diagnosis from us, instead of you. If the patient does not respond to the initial SMS to confirm their identity, we will contact the practice to check that we have the correct number and for your help to follow up.

Please let us know if you have any concerns or suggestions about this new process.

Paratyphoid may still be in the community

The 2017 paratyphoid outbreak was caused by contaminated mussels gathered from Napier harbour, despite the warning signs. Most of the 11 confirmed paratyphoid cases ate these mussels at a Tangi in Flaxmere on 28-30 August 2017.

A 4 year-old boy was notified with paratyphoid on 27 April 2018. He had a 2-3 week history of fever, vomiting and intermittent diarrhoea. His mother is the only one of his close contacts who had a positive stool culture for paratyphoid. She had had intermittent non-specific abdominal symptoms since last year. Mother and child both ate mussels at the Flaxmere Tangi last year.

Paratyphoid can be carried without symptoms and then later cause illness, and this is to remind you that there may still be carriers in the community from last year's outbreak who could cause further cases.

Annex 1: Exclusion and Clearance for Enteric Infections

All cases of gastroenteritis should be considered infectious and stay **off work/school/EC until 48 hours after symptoms have ceased**. In cases specified below, additional exclusion is advised until stools are clear of pathogen. Contacts are household members and others who may have been infected with or by the case, or could have infected the case.

Pathogens that do not require clearance or exclusion (once well for 48 hours**)**

- Acute gastroenteritis, including due to *Bacillus* species, *Clostridium perfringens*, *Cyclospora,* Norovirus, Rotavirus, and *Staph. aureus*
- *Campylobacter*
- *Cryptosporidium* **[No swimming pool for 2 weeks**]
- *Giardia lamblia*
- *Salmonella*
- *Shigella sonnei*
- *Yersinia*

High-Risk People (HR)

(1) People whose **work involves preparing or serving unwrapped food to be served raw or not subject to further heating** (including visitors or contractors who could potentially affect food safety)
(2) Staff, inpatients and residents of **health care, residential care, social care or early childhood** facilities **whose activities increase risk** of transferring infection via the faecal-oral route
(3) Children under the age of 5 attending early childhood services/groups
(4) Other adults or children at higher risk of spreading the infection due to illness or disability.

HR CASES that require exclusion until cleared (non-HR do not need clearance or exclusion)

Entamoeba histolytica	One negative stool > 1 week after treatment
S. enterica serovar Typhi and Paratyphi	3 negative stools > 48 hours apart and > 48h after completing antibiotics (> 1 month if not treated). *Note:* School children also need clearance.
Shigella boydii, dysenteriae, and flexneri	2 negative stools at least 48 hours apart
STEC	
Vibrio cholerae O1 or O139	
Hepatitis A	For 7 days after jaundice/symptom onset

CONTACTS that require screening or exclusion

Entamoeba histolytica	Screen household
Giardia lamblia	Screen symptomatic classmates if reports of diarrhoeal illness in previous 2 weeks in childcare centre attended by case
STEC	Exclude HR until 1 negative stool

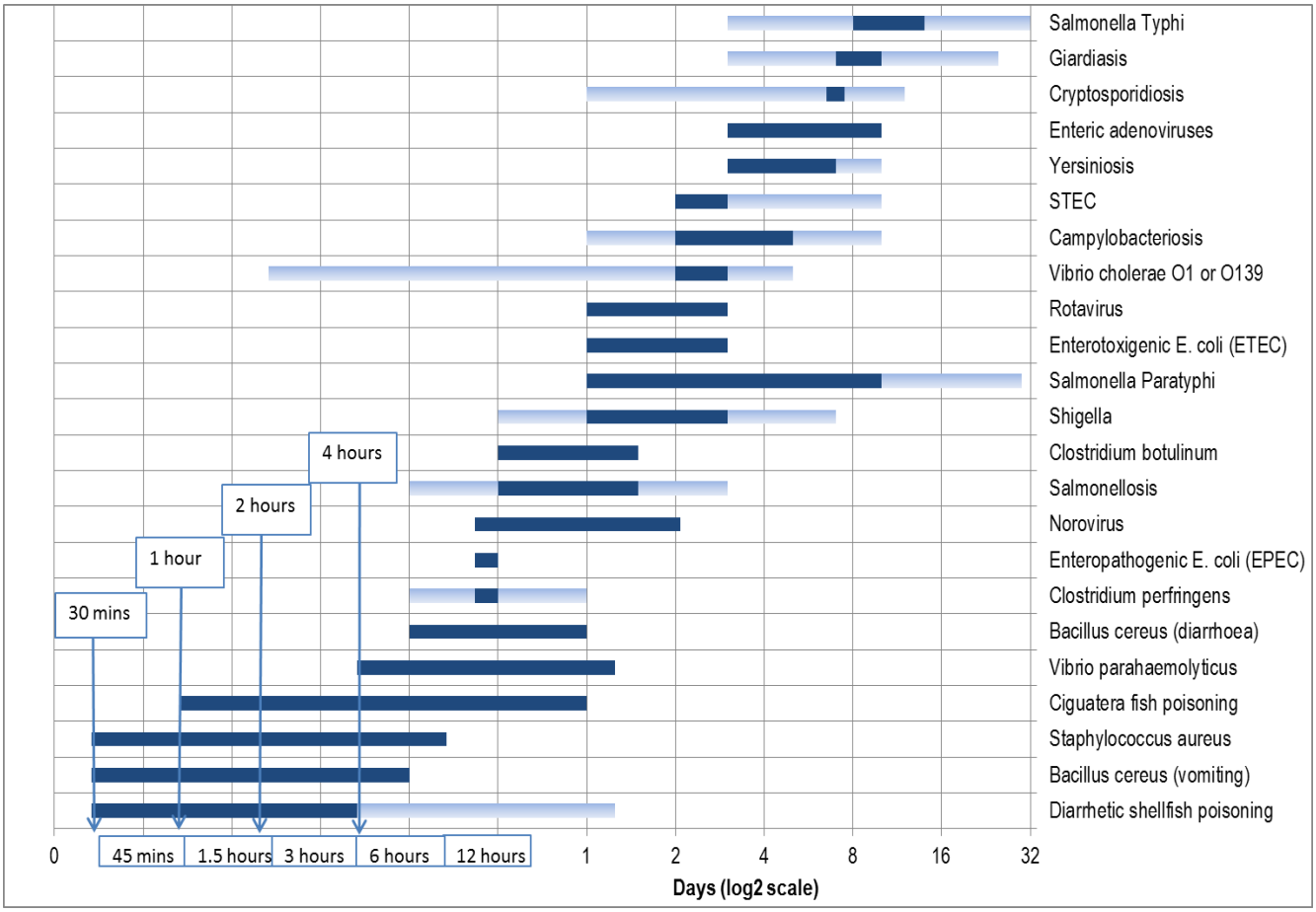
Shigella boydii, dysenteriae, and flexneri	
S. Typhi and Paratyphi – *only if locally acquired.* (For travel acquired, screen co-travellers))	Exclude HR until 2 negative stools (> 48 hours apart); all other household and close contacts no exclusion but 2 stools.

Annex 2: Incubation periods

Cause	Incubation period (range)
Bacillus cereus (diarrhoea)	6–24 hours
Bacillus cereus (vomiting)	0.5–6 hours
Campylobacteriosis	2–5 days (1–10 days)
Ciguatera fish poisoning	1–24 hours
Clostridium botulinum	12–36 hours
Clostridium perfringens	10–12 hours (6–24 hours)
Cryptosporidiosis	7 days (1–12 days)
Diarrhetic shellfish poisoning	Hours
Enteric adenoviruses	3–10 days
EPEC	10–12 hours
ETEC	24–72 hours
Giardiasis	7–10 days (3–25 days).

Cause	Incubation period (range)
Norovirus	10–50 hours
Rotavirus	24–72 hours
Salmonellosis	12–36 hours (6–72 hours)
Salmonella Paratyphi	1–10 days (up to ~30 days)
Salmonella Typhi	1–3 weeks (3 days – 90 days)
Shigellosis	1–3 days (12 hours – 1 week)
Staphylococcus aureus	0.5–8 hours
STEC	2-3 days (up to 10 days)
Vibrio cholerae O1 or O139	2–3 days (2 hours – 5 days)
Vibrio parahaemolyticus	4–30 hours
Yersiniosis (not Y. pestis)	3–7 days (< 10 days)

Chart of incubation period (days in log scale) of pathogen. Range (light) and usual (dark)



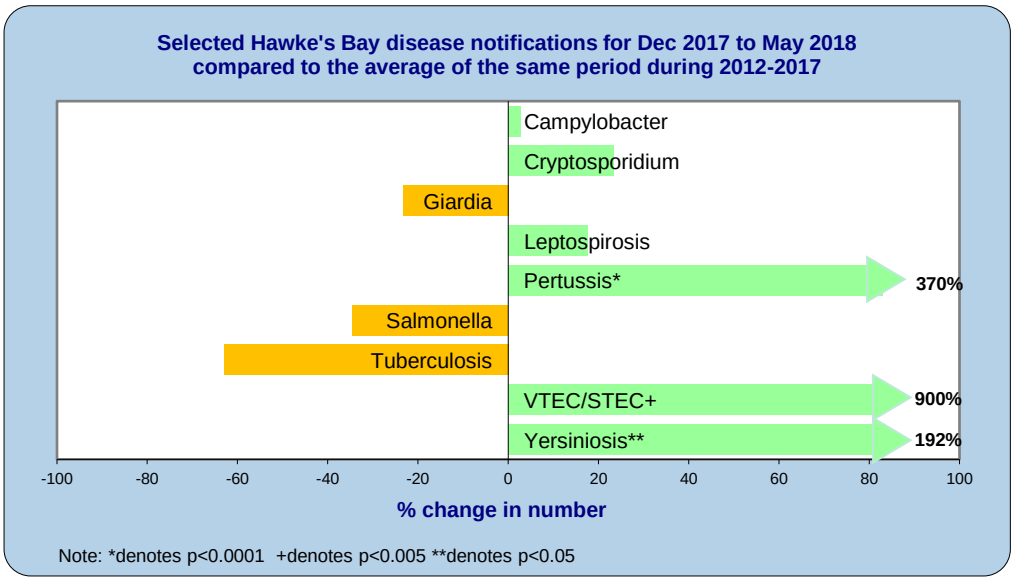
Incubation periods from the Ministry of Health Communicable Disease Control Manual. The chart shows the data graphically (except Diarrhetic shellfish poisoning). Note the log scale to capture the wide range.

Table 1: Notified disease summary

Selected notifications June 2017 to May 2018

Disease	Hawke's Bay Cases	Hawke's Bay rate*	New Zealand Cases	New Zealand rate*
Campylobacter	290	176.9	6,649	138.7
Cryptosporidium	54	32.9	1,685	35.2
Giardia	63	38.4	1,761	36.7
Invasive pneumococcal disease	24	14.6	537	11.2
Latent tuberculosis infection	8	4.9	281	5.9
Legionella	1	0.6	238	5.0
Leptospirosis	12	7.3	124	2.6
Listeriosis	1	0.6	26	0.5
Meningococcal disease	5	3.0	128	2.7
Mumps	3	1.8	1,541	32.1
Paratyphoid fever	12	7.3	49	1.0
Pertussis	149	90.9	3,221	67.2
Rheumatic fever - initial attack	4	2.4	168	3.5
Salmonellosis	29	17.7	1,084	22.6
Shigellosis	10	6.1	256	5.3
Tuberculosis - new case	7	4.3	279	5.8
VTEC/STEC Infection	25	15.2	731	15.2
Yersinia	43	26.2	1,104	23.0

* Annualised crude rate per 100,000 population calculated from 2017 mid-year estimates.
Hawke's Bay rate +10.0 higher / lower than the national rate
Note: The figures for Chlamydia & Gonorrhoea are for the 12 months ending Dec 2017.
* Chlamydia is not a notifiable disease



Commentary on surveillance summary:

Consistent with the national Pertussis outbreak Hawke's Bay Pertussis notifications continue, but at a lower rate than previous. Higher rates of Yersisiniosis reflect a national increase, as does a higher rate of Shiga Toxic E Coli. However the latter increase has been significantly impacted by a change in laboratory testing to PCR.