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Regional Public Health
HAUORA Ā IWI KI TE ŪPOKO O TE IKA A MĀUI
Better health for the greater Wellington region

PUBLIC HEALTH POST

Public Health for Primary Care in Wellington, Wairarapa and the Hutt Valley

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Issue 37 - June 2019

CHANGES TO HEPATITIS C MANAGEMENT IN PRIMARY CARE

Dr Craig Thornley, Medical Officer of Health, Regional Public Health

A new direct-acting antiviral (DAA) oral regimen for the treatment of hepatitis C virus (HCV) infection, glecaprevir / pibrentasvir (Maviret®), became subsidised without restriction in February. The treatment regimen with glecaprevir / pibrentasvir is simpler than previous regimes and treatment for hepatitis C can now be predominantly carried out in primary care. Only patients with cirrhosis, or those who still have hepatitis C despite previous treatment need be referred to secondary care. It is important to check hepatitis B status before prescribing Maviret.

The prevalence of HCV infection is not known, but is assumed to be similar to that in Australia, which has obtained accurate HCV infection prevalence data through high diagnosis rates and mandatory notification of prevalent cases. Based on the Australian prevalence of 1.28%, Gane et al1 estimated that in 2014 there could be approximately 54,000 people in New Zealand living with past or present HCV infection.

HCV infections globally are due to six main genotypes, and in New Zealand 56% of infections are caused by genotype 1, 35% due to genotype 3, 8% due to genotype 2, and the remaining 2% due to genotypes 4,5 and 6. Patients with infection due to genotypes 2, 3 and 6 but without cirrhosis were previously ineligible for subsidised treatment. The introduction of glecaprevir / pibrentasvir has meant that subsidised treatment can be offered regardless of genotype, removing the previous requirement for genotype testing.

Patients with the following risk factors for HCV infection should be tested:

- History of injectable drug use
- Receipt of a blood transfusion in New Zealand prior to July 1992
- Migration from or receiving healthcare in a region with high HCV prevalence
- Time spent in prison
- Tattooing, body piercing or alteration (e.g. scarification) that was not performed in a licensed premises within New Zealand; for instance, performed in prison or in a country with high HCV prevalence
- History of acute hepatitis, jaundice, or abnormal liver function
- Born to an HCV infected mother

Testing is available through usual medical services and at some needle exchange services.

Further guidance for assessment and management primary care is available on the BPAC website, with a summary available for download from https://bpac.org.nz/2019/hepc/docs/hepc.pdf.

Note that prescriptions for glecaprevir / pibrentasvir can only be filled by enrolled pharmacies. A list of pharmacies is available at: www.maviret.co.nz (navigate to the Pharmacy Locator page). There is no co-payment required for glecaprevir / pibrentasvir prescriptions. Note that prescriptions for other HCV treatment regimens, specifically ombitasvir / paritaprevir / ritonavir (Viekira Pak®) or ledipasvir / sofosbuvir (Harvoni®), need to be sent directly to PHARMAC.

References:

1. Gane E, Stedman C, Brunton C, Radke S, Henderson C, Estes C, Razavi H. Impact of improved treatment on disease burden of chronic hepatitis C in New Zealand. New Zealand Medical Journal 2014; 127: 6390

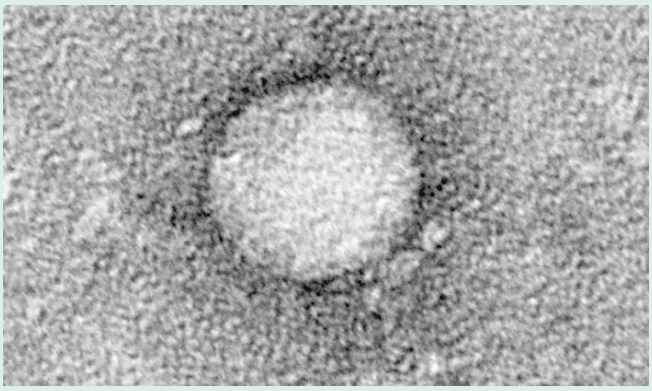


Figure: Electron micrograph of hepatitis C virus from cell culture (scale = 50 nanometers). Courtesy of the Center for the Study of Hepatitis C, The Rockefeller University. Public domain.

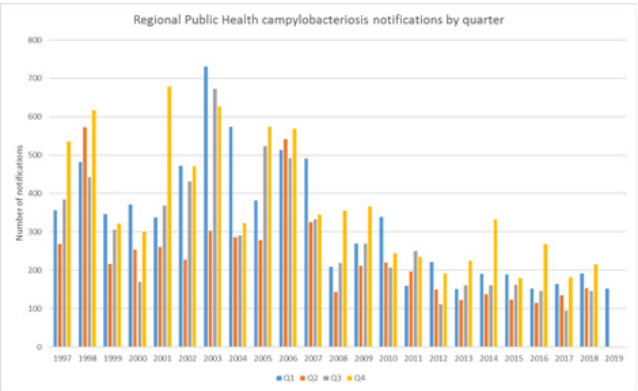
WHAT ARE YOU REPORTING?

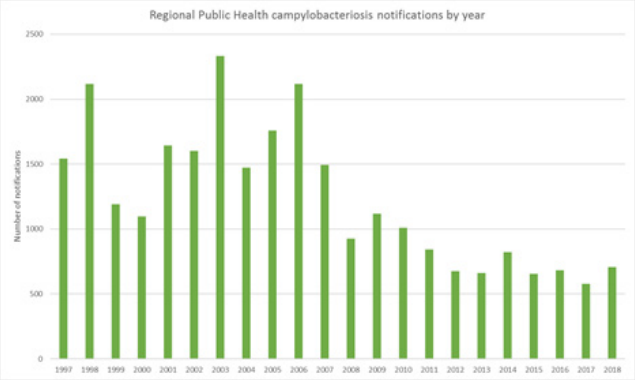
THREE MONTHS OF NOTIFIED CASES IN THE HUTT VALLEY, WAIRARAPA, WELLINGTON

Dr Jonathan Kennedy, Medical Officer, Regional Public Health

Table 1. Notified cases by DHB in the Hutt Valley, Wairarapa and Wellington 1/01/2019 – 31/03/2019.
Table includes 'confirmed' cases with additional 'probable' cases in brackets. Accessed 6/05/2019.

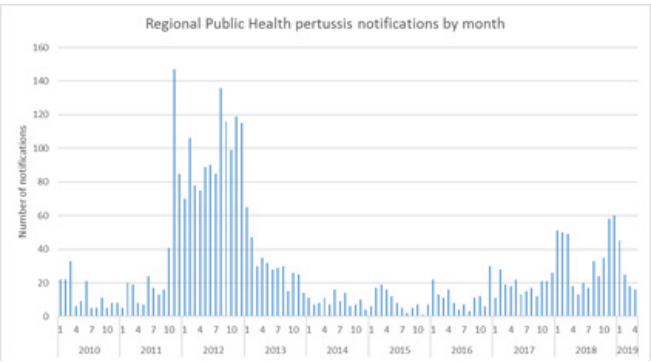
Notifiable Condition	Number of cases (confirmed cases only)			
	Hutt Valley	Wairarapa	Wellington	Total
Campylobacteriosis	39	92	26	157
Cryptosporidiosis	4	13	2	19
Gastroenteritis	0(3)	0(12)	0(5)	0(20)
Giardiasis	11	28	5	44
Hepatitis C		1		1
Invasive pneumococcal disease	2	4	1	7
Leprosy		1		1
Listeriosis	2	1	1	4
Meningococcal disease		2		2
Mumps	0(2)	2		2(2)
Pertussis	17	51(11)	8	76(11)
Salmonellosis	14	23	9	46
Shigellosis		4		4
Tuberculosis disease	1	3		4
Typhoid fever	1	1		2
VTEC/STEC infection	9	17	8	34
Yersiniosis	19	25	9	53
Grand Total	**119(5)**	**268(23)**	**69(5)**	**456(33)**





Notes ([1,2])

1. Campylobacteriosis cases accounted for one third of all confirmed notifications to Regional Public Health. With fluctuation, campylobacteriosis notifications have remained stable since 2012 when looking by year. Notifications have been consistently highest in the 4th quarter of the year from October to December, and the 1st quarter of the year from January to March, with a similar longitudinal pattern for each quarter of the year.
2. Leprosy was notified and confirmed in a 47 year old female who had travelled from India in late 2018.
3. Four cases of listeriosis were notified in the three months: A 63 year old female, living rurally with animal contacts; a 45 year old male with immune suppression who presented with septicaemia; a 79 year old male with immune suppression and contact with cattle; a 75 year old male who died with listeria monocytogenes identified in blood cultures.
4. The two meningococcal disease cases were a 24 year old male with meningococcal disease type C, and a 5 year old male with meningococcal disease type B.
5. Mumps was notified in a two year old male from Lower Hutt which remains as a 'probable' case with no confirmatory sample now expected. Four other notifications were investigated and determined not to be cases.
6. Pertussis notifications have continued to drop as evident in the accompanying graph with the late 2018 peak now more circumscribed as a discrete outbreak.



7. STEC notifications remain high relative to past levels, continuing to reflect the change in laboratory testing practice previously explained in this **Public Health Post Issue 33 - June 2018.**

References

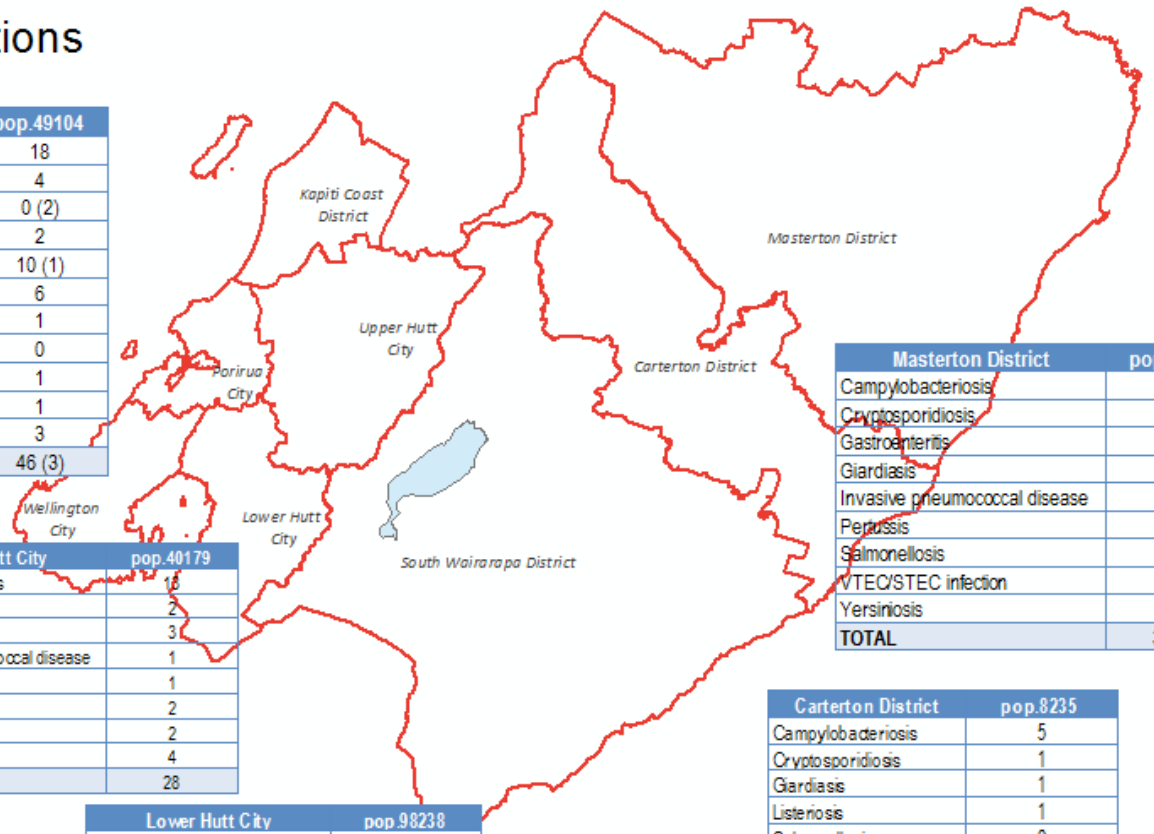
1. The Institute of Environmental Science and Research Ltd (ESR). EpiSurv database of notifiable conditions. 2019.
2. Regional Public Health. Notifiable condition surveillance records. 2019.

Regional Public Health Notifications

1st January 2019 to 31st March 2019

Porirua City	pop.51717
Campylobacteriosis	13
Cryptosporidiosis	1
Gastroenteritis	0 (1)
Giardiasis	4
Invasive pneumococcal disease	3
Listeriosis	1
Meningococcal disease	2
Mumps	2
Pertussis	12 (5)
Rheumatic fever	0
Salmonellosis	2
Tuberculosis	1
VTEC/STEC infection	4
Yersiniosis	4
TOTAL	49 (6)

Kapiti Coast District	pop.49104
Campylobacteriosis	18
Cryptosporidiosis	4
Gastroenteritis	0 (2)
Giardiasis	2
Pertussis	10 (1)
Salmonellosis	6
Shigellosis	1
Tuberculosis	0
Typhoid fever	1
VTEC/STEC infection	1
Yersiniosis	3
TOTAL	46 (3)



Masterton District	pop.23352
Campylobacteriosis	12
Cryptosporidiosis	1
Gastroenteritis	0 (1)
Giardiasis	1
Invasive pneumococcal disease	1
Pertussis	7
Salmonellosis	3
VTEC/STEC infection	3
Yersiniosis	5
TOTAL	33 (1)

Upper Hutt City	pop.40179
Campylobacteriosis	18
Cryptosporidiosis	2
Giardiasis	3
Invasive pneumococcal disease	1
Listeriosis	1
Pertussis	2
Salmonellosis	2
Yersiniosis	4
TOTAL	28

Wellington City	pop.190956
Campylobacteriosis	61
Cryptosporidiosis	8
Gastroenteritis	0 (9)
Giardiasis	22
Hepatitis B	0
Hepatitis C	1
Invasive pneumococcal disease	1
Legionellosis	0
Leprosy	1
Pertussis	29 (5)
Salmonellosis	15
Shigellosis	3
Tuberculosis	2
VTEC/STEC infection	12
Yersiniosis	18
TOTAL	173 (14)

Carterton District	pop.8235
Campylobacteriosis	5
Cryptosporidiosis	1
Giardiasis	1
Listeriosis	1
Salmonellosis	2
VTEC/STEC infection	3
Yersiniosis	2
TOTAL	15

Lower Hutt City	pop.98238
Campylobacteriosis	26
Cryptosporidiosis	2
Gastroenteritis	0 (3)
Giardiasis	8
Invasive pneumococcal disease	1
Listeriosis	1
Mumps	0 (2)
Pertussis	15
Rheumatic fever	0
Salmonellosis	12
Tuberculosis	1
Typhoid fever	1
VTEC/STEC infection	9
Yersiniosis	15
TOTAL	91 (5)

South Wairarapa District	pop.9528
Campylobacteriosis	9
Gastroenteritis	0 (4)
Giardiasis	3
Pertussis	1
Salmonellosis	4
VTEC/STEC infection	2
Yersiniosis	2
TOTAL	21 (4)

Notes:

1. Population data from Statistics New Zealand 2013 Census 'usually resident population'.

2. Tables present the number of 'confirmed cases', with additional 'probable cases' in brackets.

3. Notification data from: The Institute of Environmental Science and Research Ltd. EpiSurv database of notifiable conditions. 2019. Accessed 6/5/2019

Figure: Notifiable cases in the Hutt Valley, Wairarapa and Wellington 1/01/2019 – 31/03/2019, tabulated by territorial authority.

SYPHILIS IS BACK - THINK SYPHILIS WITH ALL YOUR PATIENTS

Syphilis is a serious and potentially life-threatening infection caused by the bacteria *Treponema pallidum.*

Syphilis is easily transmitted by sexual contact, including through oral sex, for up to two years after infection; and can be transmitted trans-placentally for at least four years.[1,2] Untreated syphilis can cause perinatal death (miscarriage or stillbirth) or congenital abnormalities in babies; and long term cardiovascular, neurological and musculoskeletal complications in adults. Syphilis infection also increases the risk of contracting or transmitting HIV.

An outbreak of syphilis in the Wellington region

The number of infectious syphilis cases identified by the Wellington Sexual Health Service (WSHS) has increased rapidly, from 5 in 2013 to 66 in 2017. Preliminary data for 2019 suggests a further increase with 38 syphilis cases (including 2 women) identified up to the end of April 2019. Most cases identified by WSHS are in men. The highest burden is in men who have sex with men (MSM), but the proportion of heterosexual cases is increasing each year.

These results are consistent with national trends that saw syphilis cases increase rapidly from 80 in 2013 to 470 in 2017. Nationally, the greatest burden of disease is in Auckland with Wellington the next most affected region.[3]

Laboratory data suggests wider spread in the Wellington region

An audit of regional laboratory data[4] from a 21-month period between 1 March 2017 and 30 November 2018 highlighted a higher burden of syphilis than was evident from WSHS data alone, particularly in women. Over this time period, 473 individuals (85% men, 75% aged >30 years) had reactive syphilis serology results indicating past or present syphilis infection. 146 (88 in 2017 and 66 in 2018) had results consistent with active infection (classified as infectious syphilis by the laboratory) and 327 had low positive results which could indicate early, late or past infection with syphilis (see Figure 1). A concerning finding was that 37 of the 67 women with reactive syphilis serology were of reproductive age (15-45 years). If untreated, these women could have transmitted syphilis to their babies if they became pregnant.

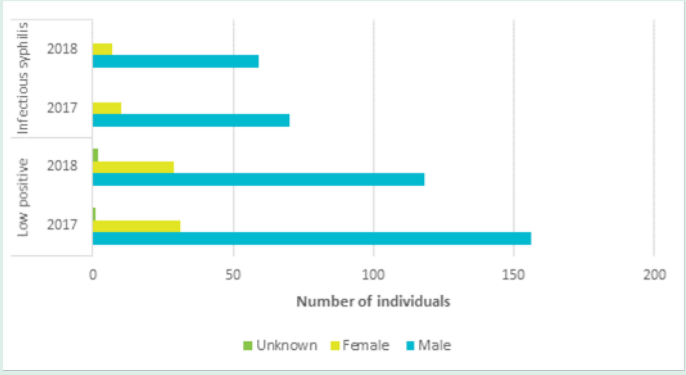


Figure 1: Distribution of positive syphilis serology results by gender and year

STI testing rates are lower in groups with a higher syphilis incidence

A review of STI and syphilis testing rates in Tū Ora Compass Health practices from 2016-2018 showed that STI testing rates were highest in adults aged less than 34 years (see Figure 2). Reassuringly, syphilis was included in STI screens in over 90% of cases, irrespective of ethnicity, location, gender or age group. This is consistent with current recommendations to offer STI testing yearly to adults aged less than 30 years and to always include syphilis serology in STI screens.

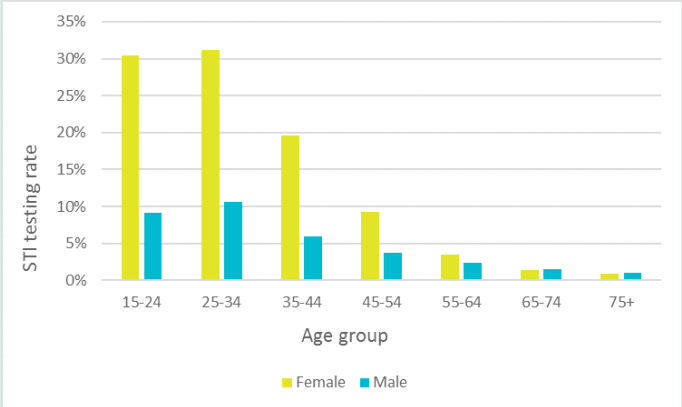


Figure 2: STI testing rates in Tū Ora Compass Health practices by age and gender

At a population level, men were much less likely to have received STI testing than women at any age, and women aged over 35 years were less likely to have received STI testing than younger women (see Figure 2). As laboratory detections and clinical diagnoses of syphilis by WSHS were predominantly in men, and 75% of laboratory detections in women were in those aged over 30 years, lower STI testing rates in these groups suggests a burden of undiagnosed syphilis infection may exist in the Wellington region.

A high index of suspicion for syphilis is needed

The signs and symptoms of infectious syphilis differ depending on whether the infection is localised or has spread systemically. Primary syphilis is characterised by painless ulcers (chancres); and secondary syphilis is characterised by systemic symptoms such as generalised rashes, fever of unknown origin with flu-like symptoms, unexplained lymphadenopathy, liver function disturbance, or unexplained neurological symptoms. Asymptomatic early latent syphilis can only be picked up on blood testing.

A high index of suspicion is needed as asymptomatic infection (up to 50% of cases) and atypical presentations (e.g. arthritis, meningitis, and uveitis) are common which can make diagnosis difficult.

Increased testing is needed to identify cases

Early diagnosis and treatment is key to preventing complications and preventing transmission of syphilis to others. Increased syphilis testing is needed to identify asymptomatic cases. As women aged over 35 years and men of all ages have low rates of STI testing yet have higher syphilis incidence, syphilis testing should be offered opportunistically to these groups.

Testing for syphilis is also important in the following groups:

- Anyone presenting with possible symptoms or signs of infectious syphilis
- Men who have sex with men – syphilis serology should be conducted at least annually but more frequently in men who have multiple sexual contacts
- All people requesting general screening for sexually transmitted infections
- All people diagnosed with another STI (including HIV)
- Pregnant females
- Sexual contacts of anyone diagnosed with infectious syphilis. Be aware that syphilis serology can be negative for up to 3 months after the initial infection.

Refer all syphilis cases to a sexual health or infectious disease physician

As managing syphilis can be complicated, specialist referral or advice is recommended. For advice on interpreting syphilis serology results, and outpatient referrals for management and assistance with contact tracing, please contact the on-call sexual health physician at WSHS on 0508 144441 or clinic triage line on 0800 188 881. Referrals can also be faxed to 04 8050528

For patients who require acute inpatient management (e.g. neurosyphilis) or afterhours, contact the on-call clinical microbiologist or on-call infectious diseases team via the relevant DHB operator.

Syphilis is a section C notifiable disease

Infectious syphilis poses a serious risk to public health. Syphilis has a disease specific notification process which protects patient anonymity. The notification must be completed by the diagnosing clinician. See the 3D HealthPathways for further details.

Further information

- New Zealand Sexual Health Society STI Management Guidelines: https://www.nzshs.org/guidelines
- Wellington Region syphilis management and referral guidelines: https://3d.healthpathways.org.nz/
- Best Practice Advisory Centre (BPAC) articles:
  - Syphilis rates continue to rise. BPAC (NZ) 2019 https://bpac.org.nz/2019/docs/syphilis.pdf
  - Syphilis: testing for “the great imitator”. Best Practice Journal 2012. https://bpac.org.nz/BT/2012/docs/best_tests_jun2012_syphilis_pages_10-18.pdf
- Goodfellow Unit Podcasts:
  - Syphilis in pregnant women & congenital syphilis - Dr Massimo Giola Goodfellow Unit, 2018 https://www.goodfellowunit.org/podcast/syphilis-pregnant-women-congenital-syphilis
  - Syphilis in New Zealand - Dr Massimo Giola Goodfellow Unit, 2018 https://www.goodfellowunit.org/podcast/syphilis-new-zealand

References

1. BPAC. Syphilis: testing for "the great imitator". Best Tests. 2012.
2. NSW Government. Syphilis Control Guidline for Public Health Units NSW Government; 2016.
3. Ministry of Health. National Syphilis Action Plan. A draft action plan to address the increase in syphilis in New Zealand Wellington: Ministry of Health; 2018.
4. Wellington SCL provides laboratory services to Wellington City, Porirua, Kapiti, Hutt Valley and Wairarapa.

KEY MESSAGES:

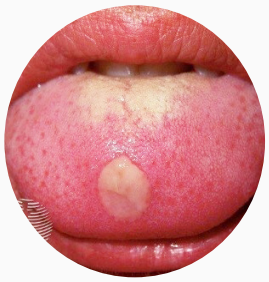
- Syphilis is spreading widely in the Wellington region.
- Most diagnosed cases are in men but cases in women are increasing.
- A high index of suspicion is needed as asymptomatic and atypical presentations are common.
- Increased testing for syphilis is needed to identify cases.
- Consider opportunistic syphilis testing in men, and women aged >30 years, due to higher syphilis incidence and lower STI testing rates.
- Refer all syphilis cases to the Wellington Sexual Health Service 0508 0144 441.

THINK **SYPHILIS** WITH EVERY PATIENT

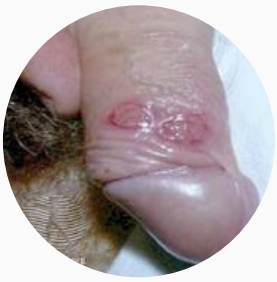
The Wellington region is experiencing a syphilis outbreak. Syphilis is highly infectious & often asymptomatic. It is easily transmitted sexually including via oral sex, and from mother to baby during pregnancy.

THINK

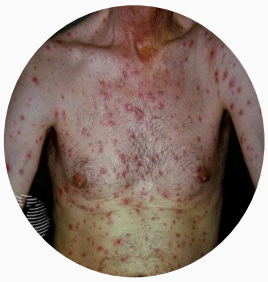
Signs and symptoms can be non-specific and mimic a wide range of diseases.



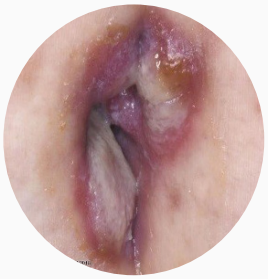
Painless ulcer (chancre) on tongue



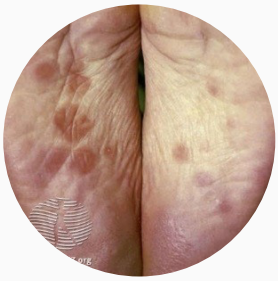
Chancre on penis



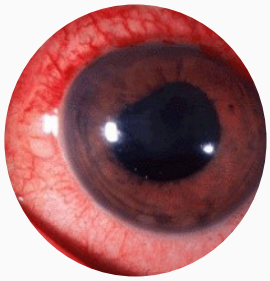
Generalised rash



Wart like growth (condylomata lata) on umbilicus



Rash on feet



Anterior uveitis

Images supplied by Dermnet NZ and Dr Jonathan Trobe, Wikimedia commons.

TEST

Include syphilis serology in all sexual health checks.

Offer syphilis testing to anyone who is symptomatic or at risk of an STI, particularly men, and women aged over 30 years, as STI testing rates are low and syphilis incidence higher in these groups.

Test for syphilis if signs or symptoms include:

- Genital ulcers
- Rashes - particularly if on the palms or soles
- Unexplained neurological or ocular signs
- Unexplained symptoms such as fever, lymphadenopathy, abnormal LFTs, alopecia

Test for syphilis if patient is in a high risk group e.g.:

- Sexual contacts of a syphilis case
- Individuals with another STI (including HIV)
- Men who have sex with men
- High risk sexual behaviours including unprotected oral sex
- Prisoners (current or recently released)
- Pregnant women with a new sexual partner

Interpretation of serology can be difficult: discuss all new or unexplained positive syphilis serology results with a sexual health or infectious diseases physician

TREAT AND TRACE

Infectious syphilis is treated with long acting intramuscular Benzathine penicillin (IM Bicillin L-A 2.4 MU).

Please discuss suspected and confirmed cases of infectious syphilis with a sexual health physician (outpatient management) or infectious diseases physician (inpatient management).

Syphilis is an anonymous notifiable disease. The notification process is different to other diseases. See, 3D Health Pathways https://3d.healthpathways.org.nz

For best practice guidelines on syphilis and other STIs:
NZ Sexual Health Society: https://nzshs.org/guidelines
3D Health Pathways: https://3d.healthpathways.org.nz/

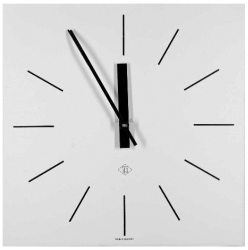
To contact a sexual health specialist:
Wellington Sexual Health Service 0800 188 881

Wellington Sexual Health Service
oranga hōkaka

Regional Public Health
HAUORA Ā IWI KI TE ŪPOKO O TE IKA A MĀUI
Better health for the greater Wellington region

EXCLUSION TIMES WITH INFECTIOUS ILLNESS

Lucy Sulzberger, Public Health House Surgeon, Kathie McCarten, Public Health Advisor, Jackie Mayne, Senior Public Health Advisor



With winter quite literally at the doorstep and the school year in full tilt, whānau around the country brace themselves for the onslaught of coughs and colds and the inevitable sick days that will result. For GPs and caregivers alike, appropriate exclusion from early childhood centres (ECCs) for the child with an infectious illness can be difficult. A combination of close physical contact, developing hygiene habits and immature immune systems, causes ECCs to create a hot bed for rapid spread of illness.

As much as these illnesses are considered "par for the course" for young children, ECC licensing regulations mandate that *"all practicable steps are taken to ensure that children do not come into contact with any person (adult or child) suffering from a condition likely to be passed on to children and likely to have a detrimental effect on them."* Regional Public Health offers assistance to ECCs in the development of their illness policy (based on Ministry of Health guidelines) and encourages that this be discussed with caregivers at the time of enrolment. Appropriate exclusion is essential in decreasing spread of illness throughout community and reducing the burden on young children, their families and the staff who care for them.

Regional Public Health has a critical role in working alongside both ECCs and GPs in protecting the health of our tamariki. In the region serviced by Regional Public Health there are over 600 ECCs. In 2018, Regional Public Health logged over 250 calls from ECCs and of these, 95 were related to the management of diarrhoeal illness.

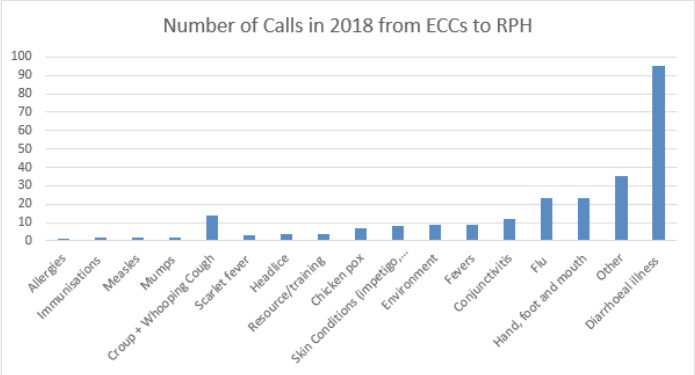


Figure: Calls between ECCs and RPH in 2018

In the same year, Regional Public Health was involved in the management of 33 outbreaks of illness at ECCs (2 influenza and 31 gastroenteritis) and in an additional six schools within the region (2 gastroenteritis and 4 influenza).

From these 39 outbreaks, more than 1550 children and staff were exposed to illness.

GPs have the ability to support ECCs and whanau to reduce the spread of illness by making sure medical certificates and advice given is consistent with Ministry of Health guidelines. All children and staff at an ECC have the potential to be affected by unnecessary exposure to an infectious illness.

EXCLUSION PERIODS:

CONJUCTIVITIS: Children must not attend ECC until the eye is no longer pink AND/OR discharging. Both viral and bacterial conjunctivitis are highly contagious.

GASTROENTERITIS: Children must not attend ECC until they are well and at least 48 hours have passed since the last vomit/diarrhoea. Most cases are viral, however bacterial and parasitic causes do exist requiring specific exclusion periods (and for some "clearance" specimens must be provided). These cases are notifiable so Regional Public Health will be directly involved.

IMPETIGO: Children must not attend ECC/school until they have completed > 24 hours of antibiotic treatment AND demonstrated improvement. Without antibiotics, children can return to their ECC once sores are healed OR if the sores are very well covered and out of the child's reach (i.e. under clothing or dressings).

FURTHER RESOURCES:

There are many other infectious conditions that can spread rapidly throughout ECCs and other childcare settings. The Ministry of Health "**Infectious Diseases: information and exclusion list**" provides an efficient tool for clear exclusion guidelines. For more detailed information, factsheets with policies and guidelines specific to ECCs can be found on the Regional Public Health website, **healthyecc.org.nz.** These are an excellent resource for ECCs, parents, whanau and caregivers.

Sources:

1. Clock image: Hannes Grobe 2010. Wall clock manufactured by Telefonbau & Normalzeit. Wikimedia Commons. Available at: https://commons.wikimedia.org/wiki/File:TN-wall-clock_hg.jpg

Infectious Diseases:
information & exclusion list

Condition	This disease is spread by	Early Symptoms	Time between exposure and sickness	Exclusion from school, early childhood centre, or work*
Rashes and skin infections				
Chickenpox	Coughing, sneezing and contact with weeping blisters.	Fever and spots with a blister on top of each spot.	10–21 days after being exposed.	1 week from appearance of rash, or until all blisters have dried.
Hand, foot and mouth disease	Coughing, sneezing, and poor hand washing.	Fever, flu-like symptoms – rash on soles and palms and in the mouth.	3–5 days	Exclude until blisters have dried. If blisters able to be covered, and child feeling well, they will not need to be excluded.
Head lice (Nits)	Direct contact with an infested person's hair.	Itchy scalp, especially behind ears. Occasionally scalp infections that require treatment may develop.	N/A	None, but ECC/school should be informed. Treatment recommended to kill eggs and lice.
Measles	Coughing and sneezing. Direct contact with an infected person. Highly infectious.	Runny nose and eyes, cough and fever, followed a few days later by a rash.	7–18 days	5 days after the appearance of rash. Non-immune contacts of a case may be excluded.
Ringworm	Contact with infected skin, bedding and clothing.	Flat, ring-shaped rash.	4–6 weeks	None, but skin contact should be avoided.
Rubella (German Measles)	Coughing and sneezing. Also direct contact with an infected person.	Fever, swollen neck glands and a rash on the face, scalp and body.	14–23 days	Until well and for 7 days from appearance of rash.
Scabies	Contact with infected skin, bedding and clothing.	Itchy rash.	4–6 weeks (but if had scabies before it may develop within 1–4 days)	Exclude until the day after appropriate treatment.
School sores (Impetigo)	Direct contact with infected sores.	Blisters on the body which burst and turn into scabby sores.	Variable	Until sores have dried up or 24 hours after antibiotic treatment has started.
Slapped cheek (Human parvovirus infection)	Coughing and sneezing. The virus may be passed from mother to child during pregnancy.	Red cheeks and lace-like rash on body.	4–20 days	Unnecessary unless unwell.
Diarrhoea & Vomiting illnesses				
Campylobacter Cryptosporidium Giardia Salmonella	Undercooked food, contaminated water. Direct spread from an infected person or animal.	Stomach pain, fever, nausea, diarrhoea and/or vomiting.	Campylobacter 1–10 days Cryptosporidium 1–12 days Giardia 3–25 days Salmonella 6–72 hours	Until well and for 48 hours after the last episode of diarrhoea or vomiting. **Cryptosporidium** – do not use public pool for 2 weeks after symptoms have stopped. **Salmonella** - Discuss exclusion of cases and contacts with public health service.
Hepatitis A	Contaminated food or water, direct spread from an infected person.	Nausea, stomach pains, general sickness. Jaundice a few days later.	15–50 days	7 days from the onset of jaundice.
Norovirus	Contact with secretions from infected people.	Nausea, diarrhoea/and or vomiting.	1–2 days	Until well and for 48 hours after the last episode of diarrhoea or vomiting.
Rotavirus	Direct spread from infected person.	Nausea, diarrhoea/and or vomiting.	1–2 days	Until well and for 48 hours after the last episode of diarrhoea or vomiting.
Shigella	Contaminated food or water, contact with an infected person.	Diarrhoea (may be bloody), fever, stomach pain.	12 hours–1 week	Discuss exclusion of cases and their contacts with public health service.
VTEC/STEC (Verocytotoxin- or shiga toxin-producing E. coli)	Contaminated food or water, unpasteurised milk. Direct contact with animals or infected person.	High incidence of bloody diarrhoea, stomach pain. High rate of hospitalisation and complications.	2–10 days	Discuss exclusion of cases and their contacts with public health service.
Respiratory Infections				
Influenza and Influenza-like illness (ILI)	Coughing and sneezing. Direct contact with infected person.	Sudden onset of fever with cough, sore throat, muscular aches and a headache.	1–4 days (average about 2 days)	Until well.
Streptococcal sore throat	Contact with secretions of a sore throat. (Coughing, sneezing etc.)	Headache, vomiting, sore throat. An untreated sore throat could lead to Rheumatic fever.	1–3 days	Exclude until well and/or has received antibiotic treatment for at least 24 hours.
Whooping cough (Pertussis)	Coughing. Adults and older children can pass on the infection to babies.	Runny nose, persistent cough followed by "whoop", vomiting or breathlessness.	5–21 days	Five days from commencing antibiotic treatment or, if no antibiotic treatment then 21 days from onset of illness or until no more coughing, whichever comes first.
Other Infections				
Conjunctivitis (Pink eye)	Direct contact with discharge from the eyes or with items contaminated by the discharge.	Irritation and redness of eye. Sometimes there is a discharge.	2–10 days (usually 3–4 days)	While there is discharge from the eyes.
Meningococcal Meningitis	Close contact with oral secretions. (Coughing, sneezing, etc.)	Generally unwell, fever, headache, vomiting, sometimes a rash. **Urgent treatment is required.**	3–7 days	Until well enough to return.
Meningitis – Viral	Spread through different routes including coughing, sneezing, faecal-oral route.	Generally unwell, fever, headache, vomiting.	Variable	Until well.
Mumps	Coughing, sneezing and infected saliva.	Pain in jaw, then swelling in front of ear and fever.	12–25 days	Exclude until 5 days after facial swelling develops, or until well.

For further information contact:

Your Public Health Nurse

Your Public Health Service

Vaccine-preventable and/or on National Immunisation Schedule

Notifiable disease (Doctors notify the Public Health Service)

Pregnant women should seek advice from their maternity provider or G.P

** Seek further advice from a healthcare professional or public health service*

New Zealand Government

hpa health promotion agency TE HIRINGA HAUORA

MINISTRY OF HEALTH MANATŪ HAUORA

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Infectious diseases poster is available from https://www.healthed.govt.nz/resource/infectious-diseases-0

DR JONATHAN KENNEDY IS LEAVING REGIONAL PUBLIC HEALTH

The Public Health Post editor and Regional Public Health Medical Officer Dr Jonathan Kennedy, who is also a Wellington General Practitioner and University of Otago Senior Lecturer, is leaving Regional Public Health after 11 years in mid-July. Dr Kennedy would like to thank all the readers of, and contributors to, The Public Health Post since its inception in 2011, and its precursor Regional Public Health publication, the Communicable Disease Bulletin.

The Public Health Post editorial team can now be contacted through Demelza O'Brien at: demelza.obrien@huttvalleydhb.org.nz or by phone at (04) 570 9002.

PUBLIC HEALTH POST READER SURVEY

A big thanks to everyone who has already responded to the Public Health Post reader survey. We're still seeking feedback on Public Health Post's content and distribution so it remains relevant to our readers. It's not too late to contribute, go to **https://www.surveymonkey.com/r/L2TKB8H**. The survey will be open until 14 July 2019. We'd appreciate if you could pass the survey on to doctors, nurses and other staff at your practice.

DISEASE NOTIFICATION – HOW YOUR GENERAL PRACTICE CAN HELP

To enable our staff to promptly initiate disease follow up we need your help in the following ways:

1. Inform your patient of the illness they have been diagnosed with or exposed to and that public health staff may be in contact.
2. Notify Regional Public Health of the disease within a timely fashion (after the case has been informed) - by phone for urgent notifications (as soon as you are aware), or by faxing a case report form for non-urgent (within one working day). You can find a list of urgent vs. non-urgent notifications on the Regional Public Health website under Health Professionals > Notifiable Diseases.
3. Complete all sections of the form, especially:
   - work/school/early childhood centre information
   - name of parent or guardian for a child under 16 years old.

The 3D HealthPathways includes a pathway on reporting notifiable diseases: **http://3d.healthpathways.org.nz**

PUBLIC HEALTH ALERTS

Regional Public Health communicates public health alerts to primary care practices by fax and by email. These communications often contain information that needs to be urgently taken on board by general practitioners and primary care nurses.

Please contact Regional Public Health on (04) 570 9002 if you have not been receiving alerts, or to check and confirm that we have your correct details.

If you are not yet receiving alerts by email, and would like to, then you can provide your email address via phoning the number above.

Ordering pamphlets and posters:

To order any Ministry of Health resources, please contact the Health Information Centre on (04) 570 9691 or email **laurina.francis@huttvalleydhb.org.nz**

For enquiries regarding the Public Health Post, please contact Demelza O'Brien, Regional Public Health, by email **demelza.obrien@huttvalleydhb.org.nz** or by phone **(04) 570 9002**. Alternatively contact one of the regional Medical Officers of Health: **Dr Jill McKenzie, Dr Craig Thornley, Dr Annette Nesdale and Dr Stephen Palmer.**

Produced by: Regional Public Health
Private Bag 31-907, Lower Hutt 5040
Ph: (04) 570 9002, Fax: (04) 570 9211