Regional Public Health
Better Health For The Greater Wellington Region

PUBLIC HEALTH POST

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

Also available online at www.rph.org.nz

October 2015

A CASE OF FOODBORNE BOTULISM

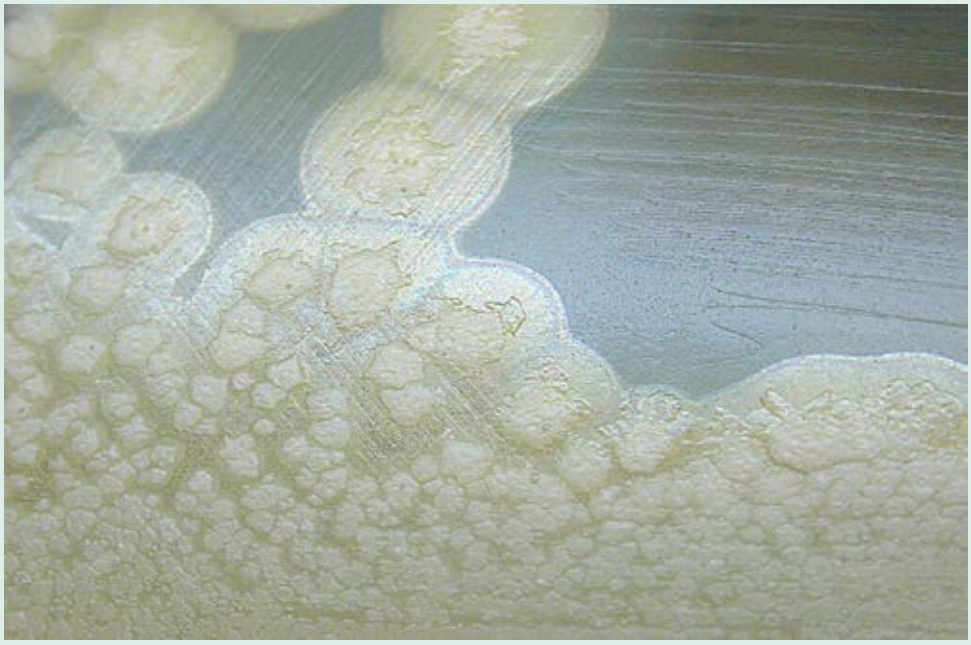


Figure 1. *Clostridium botulinum* growing on egg yolk agar[1].

In December 2014, the on-call Medical Officer of Health at Regional Public Health (RPH) received a notification from an infectious diseases consultant at Wellington Regional Hospital concerning a suspected case of botulism.

The case; a New Zealander in his 50's, who lives and works in Japan, was on holiday in New Zealand with a friend when he experienced the sudden onset of diplopia, blurred vision and vomiting. He was admitted to hospital and his symptoms rapidly evolved over the next day to include dysphagia, bulbar weakness, followed by generalised muscle weakness, bilateral descending paralysis and respiratory arrest. Repeat EMG studies were consistent with botulinum toxin effects. The bacteria was not able to be cultured from blood, stool or gastric aspirates. Confirmatory serum toxin testing was not available in New Zealand.

Botulism is an extremely rare and potentially fatal disease caused by the organism *Clostridium botulinum*. C. botulinum produces spores which exist widely in the environment including in soil, river and sea water. Foodborne botulism occurs when the bacteria grow and produce toxins in food prior to consumption. Bacterial growth and toxin production occur in food products with low oxygen content and certain combinations of storage temperature and preservative parameters[2]. The production methods, packaging and storage of foods are the critical factor rather than the type of food, although low pH and low water activity will inhibit growth.

This is only the third case of foodborne botulism reported in New Zealand. The previous cases were two family members who ate home-preserved mussels and water cress in 1984[3].

A rapid response was required from RPH staff due to the serious nature of the illness and the need to identify possible sources to prevent other potential cases. The investigation focused on identifying any potential sources including: contaminated foods, any foods brought by the case from Japan, or the use of cosmetic or therapeutic botulinum injections or intravenous drug use.

This investigation posed a number of challenges; including that the ill man was unable to provide any information directly, as he was in Intensive Care Unit on a ventilator. Health Protection Officers interviewed his non-English speaking friend with an interpreter and met with his New Zealand based family. The investigation confirmed he had arrived in New Zealand two days prior to becoming unwell. A food history and activity timeline for the preceding days was established. This identified the consumption of a commercially manufactured rice dish to be the most likely source of the pathogen and associated toxin. This fitted with the symptom onset time, commonly 12-36 hours following exposure, and was identified as the only dish that had been eaten solely by the case. Prior to his deterioration the ill man had told hospital staff the rice dish was bitter and had a blue cheese taste. No other risk foods or factors were identified.

A complicating factor in the investigation was the initial description of a dry rice product which had been stored in the pantry. This profile is not consistent with a food that would support the growth of *C. botulinum*. However, further enquiries revealed the rice product had been purchased by a third party and was a heat and eat risotto in a plastic pouch, purchased chilled from a local supermarket in July 2014. There was no left over product to send for laboratory testing and the packaging had been disposed of.

The supermarket was visited and confirmed that they only stock one brand of chilled risotto. A sample of product was purchased. It was found that the product had a shelf life of approximately 100 days and was labeled with a 'Best Before' date rather than a 'Use By date'. In addition, the instructions to "keep refrigerated 2-4°C" were on the back of the pack among numerous lines of product information and in the same small-sized font. The product the case consumed was significantly past the recommended storage time and had been inappropriately stored at ambient temperature. *C. botulinum* is an anaerobic organism, and therefore a wet food in a limited oxygen environment that had been stored unrefrigerated for approximately six months, represented the most likely source.

This investigation raises several issues related to chilled 'ready to eat' foods for both manufacturers and consumers. For consumers, it is important to check and adhere to the recommended shelf life and storage conditions of food products. Some ready made products are shelf stable and some require refrigeration. For manufacturers, it is important to note that foods are often bought by people other than the person who will store and eat the product and important storage advice must be prominent and visible.

The man was treated with botulinum antitoxin and required intensive care and rehabilitation support. While he has made a remarkable recovery his rehabilitation is on-going.

References

1. Clostridium botulinum image: CDC/ Courtesy of Larry Stauffer, Oregon State Public Health Laboratory 2012. Available at: **https://commons.wikimedia.org/wiki/File:C._botulnium_AEY_lipase.JPG**
2. World Health Organisation. Botulism: Fact sheet no. 270. 2013: Geneva.
3. Flacks L. Botulism in New Zealand. NZMJ 23 October 1985: 892-3.

MINISTRY OF HEALTH REMINDER REGARDING SAWMILL WORKERS

Regional Public Health would like to draw your attention to the July 2015 Ministry of Health reminder regarding the support available for former sawmill workers:

The Special Support Service for Former Sawmill Workers Exposed to PCP (the Sawmill Workers Service) is for former sawmill workers who were exposed to pentachlorophenol (PCP) and other hazardous substances at sawmills throughout New Zealand from the 1950s to the 1980s. The Sawmill Workers Service, established in 2010, aims to help people stay healthy by supporting the early detection of diseases, promoting healthy lifestyles and reducing modifiable risk factors. The Sawmill Workers Service is based on an annual health check delivered by a general practice team in a primary care setting. It includes referrals to other publicly funded services depending on patients' health needs.

More information about the service is available online at **http://www.health.govt.nz/our-work/environmental-health/dioxins/dioxins-health-support-services/special-support-service-former-sawmill-workers-exposed-pcp**, or search **www.health.govt.nz** for "sawmill". Schedule C5 of Version 3 of the PHO Services Agreement describes more detail about the annual health checks.

Sources

1. Ministry of Health 2015. Immunisation Update 6th July 2015.
2. Saw image: Ben Franske 2009. Wikimedia Commons. Available at: **https://commons.wikimedia.org/wiki/File:Sawmill_Circular_Saw_Blade.jpg**

INVASIVE MENINGOCOCCAL DISEASE

Dr. Peter Murray, Public Health Registrar, and Dr. Annette Nesdale, Medical Officer of Health, Regional Public Health

Key Points:

- *Neisseria meningitidis* is commonly carried in the nasophayrnx of ~15% of the population.
- *N. meningitidis* can cause serious and invasive disease, and is notifiable under the Health Act 1956.
- The cornerstones of clinical management for invasive *N. meningitidis* infection are early identification and treatment with antibiotics.
- From a public health perspective, the key priorities following an invasive *N. meningitidis* disease notification are managing close contacts of an index case (including chemoprophylaxis and vaccination) and educating about the disease.
- Chemoprophylaxis for close contacts is used to prevent carriage and reduce transmission of *N. meningitidis*; it does not prevent the development of disease in those incubating the disease.

Neisseria meningitidis is a well-recognised pathogen. It is droplet spread and is commonly carried (asymptomatically) in the nasopharynx of ~15% of the population[1].
In certain circumstances, the details of which remain poorly understood, it can cause severe disease – invasive meningococcal disease (IMD)[1]. IMD usually presents as meningitis or septicaemia, or both[2]. Any form of IMD is notifiable under the Health Act 1956[1].

National and regional notifications of IMD have decreased significantly from the peaks in the late 1990s and early 2000s (Figures 1 and 2). MeNZB strain specific group B vaccine was used in NZ from 2004-2008 during the nationwide outbreak of a Group B strain (Figure 1). The protection from this vaccine is not long-lasting and it is not expected that anyone vaccinated would still have protection from group B disease.

In 2014, there were only four confirmed or probable IMD cases in the greater Wellington region. The group B strain of *N. meningitidis* was the most common across New Zealand in 2014, accounting for 72% (26) of cases where the strain could be determined[3]. The group C strain was the next most common and accounted for 17% of cases[3].

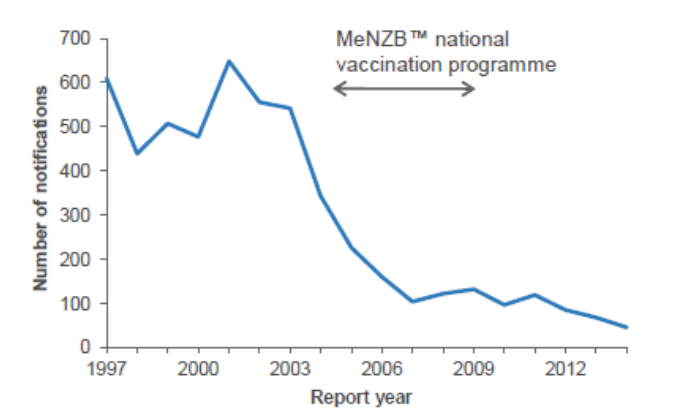


Figure 1. National notifications of meningococcal disease by year from 1997-2014. Source: ESR Notifiable Diseases in NZ: Annual Report 2014[3].

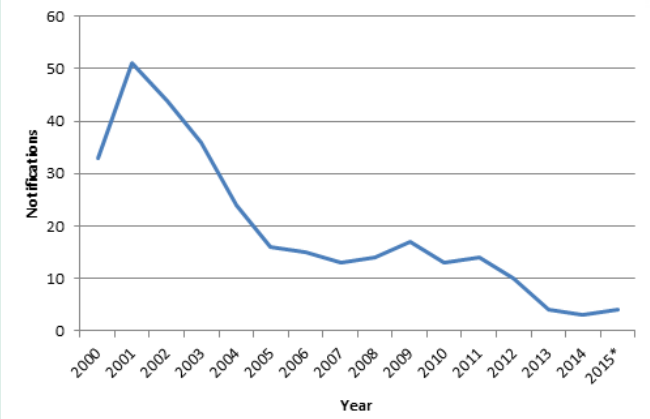


Figure 2. IMD notifications in the Greater Wellington region, by year. Source: Episurv[4].

*Notifications recorded on Episurv as of August 2015.

The need for prompt identification and administration of antibiotics in IMD is well understood by the medical community. What may be less well known is the public health response to a notified case, which includes:

- Identifying and managing close contacts of a person with IMD; and
- Health education and awareness raising about IMD.

The purpose of this article is to explore the management of close contacts in more detail.

Rationale for identifying and managing close contacts

N. meningitidis is transmitted from person-to-person through large respiratory droplets from the upper respiratory tract[2]. Once outside the body, the bacteria die rapidly. Although the vast majority (~87%) of IMD cases are sporadic, research has demonstrated that close contacts of an index case are 100-800 times more likely to develop IMD when compared to background risk[2,5]. Other studies have found that the absolute risk for household close contacts developing IMD (over the subsequent 30 days) is approximately one in 300[5-7].

The public health response to an index IMD case includes informing contacts of early symptoms of IMD, and the importance of seeking immediate medical advice on suspicion. A key public health priority is to identify any **close** contacts of the index case to reduce the risk of secondary IMD cases.

Close contacts are defined by the New Zealand Ministry of Health as any person who:

Has had unprotected contact with upper respiratory tract or respiratory droplet from the case during the seven days before onset of illness to 24 hours after onset of effective treatment[1].

Common examples of people who are included in this definition are:

- Those sleeping at least one night in the same household, dormitory or bunkroom.
- Those sitting adjacent to the case in a plane, bus or train for >8 hours.
- Those who have exchanged upper respiratory tract secretions e.g. through intimate kissing.
- Healthcare workers who have had intensive unprotected contact (not wearing a mask) with the case's oropharynx and oropharyngeal secretions (e.g. when intubating or resuscitating).
- Others as determined by the Medical Officer of Health (e.g. children at an Early Childcare Centre).

People who are NOT usually considered close contacts (unless they meet one of the criteria above) include: work colleagues, friends, people sitting in the same waiting room as a case or children at the same school. Contact which is NOT usually considered 'close' includes kissing on the cheek or sharing food or drinks with the index case.

Any person who meets the definition of a close contact is assessed and may be offered chemoprophylaxis[1]. The aims of chemoprophylaxis are two-fold: eliminate meningococci from any carrier who is in the network of contacts close to the case or eradicate meningococcal carriage in those who have recently acquired the invasive strain[1, 2]. Research suggests that chemoprophylaxis can reduce the risk of close contacts developing secondary IMD by 84% over the first 30 days[8].

Ideally, chemoprophylaxis is given within 24 hours of the index case being diagnosed, but it can be given up to 14 days after diagnosis. Commonly used antibiotics for chemoprophylaxis include rifampicin, ciprofloxacin or ceftriaxone[1]. A key message relating to chemoprophylaxis is that it **DOES NOT PREVENT A PATIENT DEVELOPING IMD IF THEY ARE ALREADY INCUBATING THE DISEASE.** Therefore, any close contacts given chemoprophylaxis are also educated to monitor for signs of IMD over the incubation period, and to seek prompt medical attention if concerned. The normal incubation period is between 3-5 days, but it can be up to 10-14 days[1]. Close contacts that are well do not need to restrict their activities and can continue at school or work.

Finally, the current New Zealand Ministry of Health guidelines recommend that close contacts of an index IMD case infected with group A, C, W135 or Y disease are immunised with a conjugate meningococcal vaccine[1].

Further information

Further information on the public health management of IMD can be found at **http://www.health.govt.nz/publication/communicable-disease-control-manual-2012**

or

http://www.rph.org.nz/content/41b73b24-aff0-4034-8a39-50934b5403d5.html

References

1. Ministry of Health. Communicable Disease Control Manual. Wellington: Ministry of Health, 2012.
2. Bennett JE, Dolin R, Blaser MJ. Mandell, Douglas, and Bennett's principles and practice of infectious diseases. 8th edition ed: Elsevier Health Sciences; 2015.
3. The Institute of Environmental Science and Research Ltd. Surveillance Report - Notifiable Disease in New Zealand 2014. Porirua: 2015.
4. EpiSurv [Internet]. The Institute of Environmental Science and Research Ltd. 2015 [cited 17 August 2015].
5. Meningococcal Disease Surveillance Group. Analysis of endemic meningococcal disease by serogroup and evaluation of chemoprophylaxis. Journal of infectious diseases. 1976;134(2):201-4.
6. Munford R, De Morais JS, De E A, Fraser D, Feldman R. Spread of meningococcal infection within households. The Lancet. 1974;303(7869):1275-8.
7. Scholten R, Bijlmer H, Dankert J, Valkenburg H. [Secondary cases of meningococcal disease in The Netherlands, 1989-1990; a reappraisal of chemoprophylaxis]. Nederlands tijdschrift voor geneeskunde. 1993;137(30):1505-8.
8. Telisinghe L, Waite T, Gobin M, Ronveaux O, Fernandez K, Stuart J, et al. Chemoprophylaxis and vaccination in preventing subsequent cases of meningococcal disease in household contacts of a case of meningococcal disease: a systematic review. Epidemiology and infection. 2015:1-10.

WHAT ARE YOU REPORTING

THREE MONTHS OF NOTIFIABLE CASES IN THE HUTT VALLEY, WAIRARAPA AND WELLINGTON

Notifiable Condition	Number of confirmed cases (with additional 'probable' cases in brackets)
Campylobacteriosis	157
Chikungunya fever	1
Cryptosporidiosis	8
Dengue fever	4
Gastroenteritis	6
Giardiasis	43
Invasive pneumococcal disease	20
Legionellosis	2
Leptospirosis	1
Listeriosis	1
Malaria	1
Meningococcal disease	4
Pertussis	9 (6)
Rheumatic fever	4
Salmonellosis	16
Shigellosis	2
Tuberculosis disease	5
Yersiniosis	14
Total	**298**

Table 1. Notifiable cases in the Hutt Valley, Wairarapa and Wellington 1/6/2015–31/8/2015.

Notes

- Most cases of campylobacteriosis had no confirmed source identified. One case was linked to undercooked home-prepared chicken livers.
- The dengue cases were acquired overseas including from Samoa, and Thailand.
- The case of malaria was linked to exposure to mosquitoes in Africa.
- One case of shigellosis had no risk factors identified, the other had been travelling in India and had a concurrent infection with campylobacter.
- The case of chikungunya fever had acquired the infection while on holiday in Fiji.
- Cases of meningococcal disease type B, C and Y were notified in the reporting period including two children under age five years and two adults. Multiple close contacts were identified by Public Health Nurses and were vaccinated or offered prophylactic treatment when indicated. Further information regarding these cases was contained in the Public Health Alert distributed August 28th (Alert 11, **www.rph.org.nz**).
- During the reporting period large numbers of influenza cases, including influenza types A and B, occurred in the region. These are not notifiable and are not included in the data tables.
- Data are presented by territorial authority on the following page.

Sources

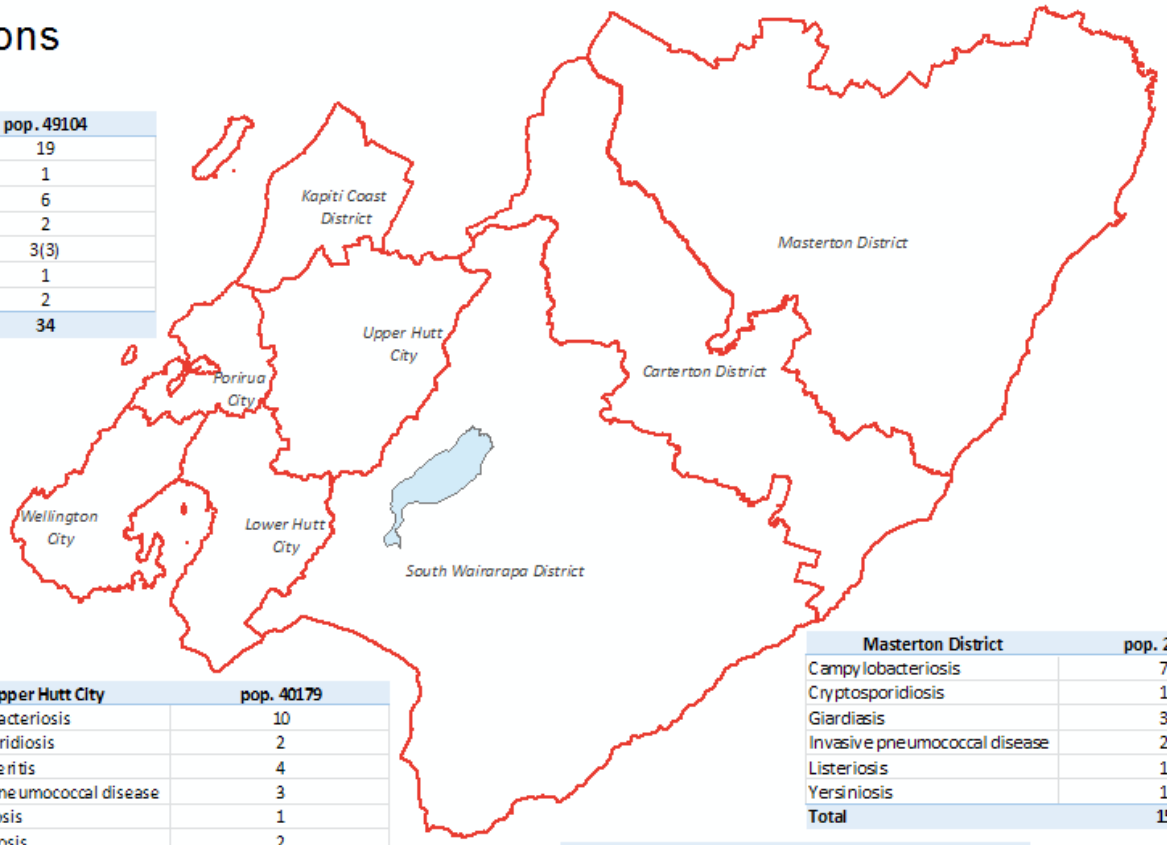
1. ESR. Episurv database of notifiable conditions accessed 7/9/2015.
2. Regional Public Health case notes.

Regional Public Health Notifications

1st June 2015 to 31st August 2015

Kapiti Coast District	pop. 49104
Campylobacteriosis	19
Cryptosporidiosis	1
Giardiasis	6
Invasive pneumococcal disease	2
Pertussis	3(3)
Salmonellosis	1
Yersiniosis	2
Total	**34**

Porirua City	pop. 51717
Campylobacteriosis	10
Cryptosporidiosis	2
Giardiasis	6
Invasive pneumococcal disease	2
Legionellosis	1
Pertussis	0(1)
Rheumatic fever	3
Salmonellosis	1
Shigellosis	1
Yersiniosis	2
Total	**28**



Wellington City	pop. 190959
Campylobacteriosis	69
Chikungunya fever	1
Dengue fever	4
Gastroenteritis	1
Giardiasis	20
Invasive pneumococcal disease	6
Legionellosis	1
Malaria	1
Meningococcal disease	3
Pertussis	4(2)
Salmonellosis	8
Tuberculosis disease	5
Yersiniosis	6
Total	**129**

Upper Hutt City	pop. 40179
Campylobacteriosis	10
Cryptosporidiosis	2
Gastroenteritis	4
Invasive pneumococcal disease	3
Leptospirosis	1
Salmonellosis	2
Yersiniosis	2
Total	**24**

Masterton District	pop. 23352
Campylobacteriosis	7
Cryptosporidiosis	1
Giardiasis	3
Invasive pneumococcal disease	2
Listeriosis	1
Yersiniosis	1
Total	**15**

Carterton District	pop. 8235
Campylobacteriosis	3
Giardiasis	1
Meningococcal disease	1
Salmonellosis	1
Total	**6**

Lower Hutt City	pop. 98238
Campylobacteriosis	32
Gastroenteritis	1
Giardiasis	6
Invasive pneumococcal disease	5
Pertussis	1
Rheumatic fever	1
Salmonellosis	2
Shigellosis	1
Yersiniosis	1
Total	**50**

South Wairarapa District	pop. 9528
Campylobacteriosis	7
Cryptosporidiosis	2
Giardiasis	1
Pertussis	1
Salmonellosis	1
Total	**12**

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' for pertussis in brackets not included in totals.

Figure 1. Notifiable cases in the Hutt Valley, Wairarapa and Wellington 1/6/2015–31/8/2015, tabulated by territorial authority.

EMERGING ARBOVIRAL DISEASES IN THE PACIFIC – CHIKUNGUNYA AND ZIKA

Dr. Peter Murray, Public Health Registrar, Regional Public Health

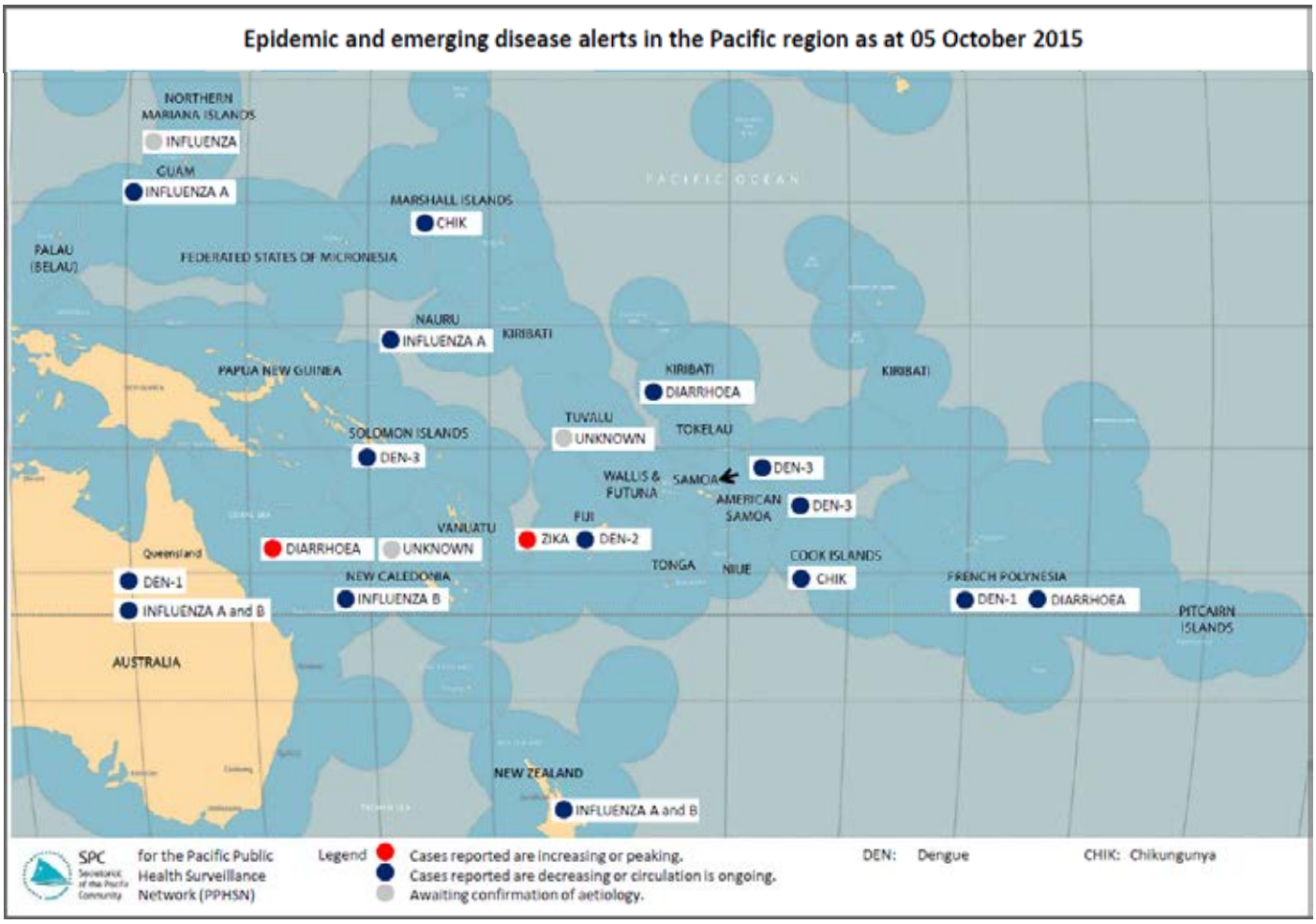


Figure 1. Pacific epidemic and emerging disease alerts as at 5/10/2015.

Key Points:

- Chikungunya and Zika are arboviruses that have recently spread into the Pacific.
- They should be considered in the differential diagnosis of an ill returning traveller from a high-risk area.
- Both viruses are notifiable conditions.
- It is important to inform patients travelling to the Pacific about the need to take appropriate precautions to prevent being bitten by mosquitos.

The rapid spread of the Chikungunya and Zika viruses is a clear example of the globalisation of infectious disease[1,2]. These arboviruses have been responsible for recent outbreaks across the Pacific (Figure 1)[2,3]. Fortunately, the mosquitos that normally carries Chikungunya and Zika viruses (and Dengue) are not established in New Zealand (NZ)[4,5]. Given their spread, these viruses are now a relevant differential diagnoses for unwell travellers returning from the Pacific[4,5].

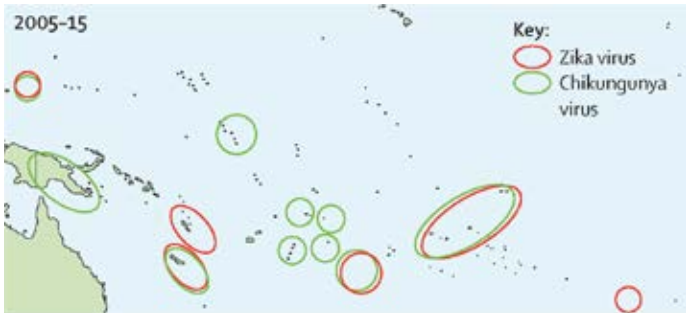


Figure 2. Zika and Chikungunya in the Pacific[2] (Please note: recently Fiji has reported Chikungunya cases[6]).

Regional and Local Notifications

From January 2014 to 1st of September 2015, there were 89 Chikungunya and 62 Zika confirmed or probable notified cases notifications across NZ[7]. This was a marked increase from the previous year with only one case of Chikungunya being notified. All cases in 2014 were overseas during the incubation period and the majority were likely acquired within the Pacific[7].

Since January 2014, there were 13 Chikungunya and 1 Zika notifications in the Wellington sub-region. All notifications came from people who had recently returned from the Pacific. Of the Chikungunya notifications, 77% had been in Samoa for the incubation period. The one Zika notification occurred in a patient returning from Rarotonga. The majority of all notifications occurred over December – February periods, corresponding to the wet seasons in the Pacific. Details of the notifications over this period are further summarised in Table 1.

Chikungunya		**Zika**	
Notifications	13 (10 confirmed, 3 probable)	**Notifications**	1 confirmed
Age	14-64 (Mean 37)	**Age**	40
Gender	Male: 7 Female: 6	**Gender**	Female
Ethnicity	Samoan: 8 NZ European: 2 Other Pacific: 3	**Ethnicity**	Cook Island Māori
Likely country infection was acquired	Samoa: 10 Tonga: 1 Fiji: 1 Kiribati: 1	**Likely country infection was acquired**	Cook Islands

Table 1. Characteristics of sub-regional notifications of Chikungunya and Zika from January 2014 – 1st September 2015.

Clinical Presentation

Chikungunya fever and Zika infection have a relatively short incubation period (usually 3-12 days)[4,8]. Their clinical manifestations are non-specific (Table 2)[4,8]. Generally speaking, they have short and mild disease courses and treatment is supportive[3,4,8]. However, a recent Zika virus outbreak was associated with Guillian-Barre syndrome[2].

	Chikungunya Fever	**Zika fever**
Mosquito Vector	*Aedes* species[3]	*Aedes* species[2]
Incubation Period	3-12 days	3-12 days
Clinical Picture	Fever, myalgia, rash, headache, nausea/vomiting and polyarthritis/ arthralgia[3,5]. Polyarthritis/ arthralgia can persist beyond acute phase[3].	Fever, myalgia, rash, headache, polyarthritis (esp of hands and feet) and conjunctivitis[4].

Table 2. Characteristics of Chikungunya fever and Zika virus infection.

Diagnostic approach

Chikungunya and Zika are primarily diagnoses of exclusion; more common and serious infectious should be excluded first[4,5]. A recommended diagnostic approach to these infections is shown in Figure 3.

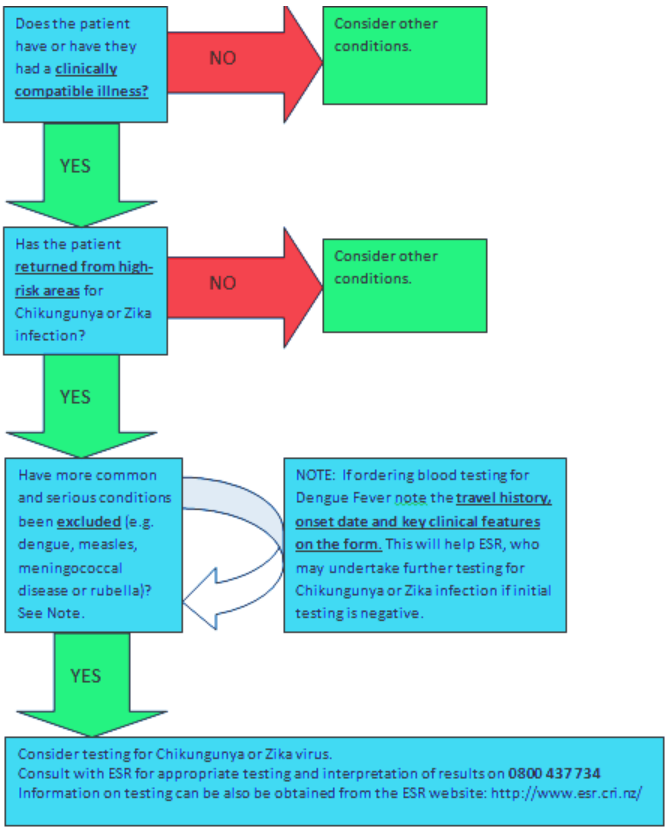


Figure 3. Diagnostic flowchart for presumed Chikungunya and Zika virus infection.

Currently, the diagnosis of both infections requires a clinically compatible illness with confirmatory laboratory results[3-5,8]. Results can take a long time to process and often return after a patients symptoms resolve. Laboratory testing is undertaken by ESR, who can perform PCR and serology for Chikungunya and PCR for Zika (serology is sent to Australia). However, the choice and type of testing, especially for Zika virus, will be dependent on the time testing is undertaken[4,5]. ESR can provide guidance on the appropriate testing and interpretation of results.

Public Health Messages

Both Chikungunya and Zika are notifiable under the Health Act 1956[8]. From a public health perspective, notifications are important to help ensure that these viruses are not being acquired in New Zealand.

It is also important to educate potential travellers to the Pacific about the need to take necessary precautions to prevent being bitten by mosquitos. Finally, patients should be advised that, if they become unwell following travel to the Pacific, they should see their general practitioner.

References

1. Charrel RN, de Lamballerie X, Raoult D. Chikungunya outbreaks-the globalization of vectorborne diseases. New England Journal of Medicine. 2007;356(8):769.
2. Musso D, Cao-Lormeau VM, Gubler DJ. Zika virus: following the path of dengue and chikungunya? The Lancet. 2015;386(9990):243-4.
3. Uptodate. Chikungunya fever: Wolters Kluwer; [updated 2015; cited 10th August 2015]. Available from: **http://www.uptodate.com/contents/chikungunya-fever?source=search_result&search=chikungunya&selectedTitle=1%7E22#H383883774**
4. Ministry of Health. Zika virus Wellington: Ministry of Health; [updated 2014; cited 10th August 2015]. Available from: **http://www.health.govt.nz/our-work/diseases-and-conditions/zika-virus**
5. Ministry of Health. Chikungunya virus Wellington: Ministry of Health; [updated 2014; cited 2015 10 August]. Available from: **http://www.health.govt.nz/our-work/diseases-and-conditions/chikungunya-virus**
6. Auckland Regional Public Health Service. Dengue Fever, Zika & Chikungunya 2015 [cited 2015 10 August]. Available from: **http://www.arphs.govt.nz/health-information/communicable-disease/dengue-fever-zika-chikungunya**
7. The Institute of Environmental Science and Research Ltd. Surveillance Report - Notifiable Disease in New Zealand 2014. Porirua: 2015.
8. Ministry of Health. Communicable Disease Control Manual. Wellington: Ministry of Health, 2012.

DISEASE NOTIFICATION – HOW YOUR GENERAL PRACTICE CAN HELP

In 2013 Regional Public Health launched the *Public Health Disease Notification Manual* to assist in the disease notification process.

Updates for this manual are located at **http://www.rph.org.nz**

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 Dr Jonathan Kennedy, medical officer, Regional Public Health, by email **jonathan.kennedy@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

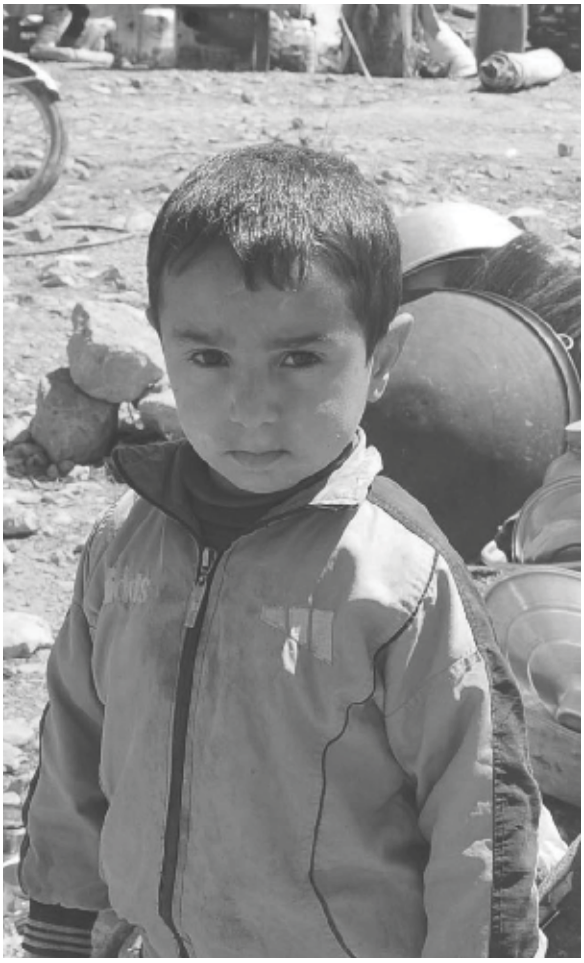
Regional Public Health
Better Health For The Greater Wellington Region

REFUGEE HEALTH & WELLBEING PRIMARY CARE WORKSHOP

DO YOU WORK WITH REFUGEES?

DO YOU WORK IN A PRACTICE THAT IS INTERESTED IN ENROLLING REFUGEE AND MIGRANT PATIENTS?

WOULD YOU LIKE TO KNOW MORE ABOUT THE RESETTLEMENT PROCESS?



This workshop will cover these aspects of refugee resettlement:

- The Immigration Process
- Mangere Refugee Resettlement Process
- Refugee Trauma Recovery Services
- Red Cross Social Services
- Wellington Community Law Centre
- Primary Health Care Clinical Services
- Regional Public Health Role
- Refugee Voices

TIME: 8.00am – 4.30pm
DATE: Friday 20th November 2015
VENUE: Conference Room, Kenepuru Education Centre, Kenepuru Hospital, 16 Hospital Drive
COST: $30 includes morning and afternoon tea, lunch, and an information pack

For workshop enquiries please contact the course facilitator Charlotte McDonnell, Public Health Nurse, on 04 587 2633 or Charlotte.McDonnell@huttvalleydhb.org.nz

For a registration form (giving payment options) and to assist with catering RSVP by November 11th 2015 to:

Carol Young
Regional Public Health
Email: Carol.Young@huttvalleydhb.org.nz