



# PUBLIC HEALTH POST

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

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July 2015

## 'WELL HOMES' COORDINATION SERVICE UP AND RUNNING TO IMPROVE HOUSING-RELATED HEALTH

A new coordination service, *Well Homes*, has been set up in the Wellington region, tasked with reducing health risks associated with housing, including crowding, and with a special focus on families at risk of rheumatic fever. The *Well Homes* coordination service brings together four local partners, Regional Public Health, He Kāinga Oranga, Sustainability Trust and Tu Kotahi Māori Asthma Trust. The service, contracted by the Ministry of Health and project managed by Regional Public Health, is designed to support families/whānau to live in warm, dry and safe homes, and is intended to work with 850 families over the next two years.

*Well Homes* offers a pathway for nurses, doctors, social workers and community health workers to refer family/whānau, who may be experiencing housing-related health problems (for example respiratory conditions, rheumatic fever and meningococcal disease) for support. Health professionals can refer any family/whānau with housing-related health problems to our service. *Well Homes* will arrange a home visit to assess what is needed and source appropriate housing interventions. The service is open to all tenure types including private rentals and social housing.

Families/whānau who do not fall exactly within the *Well Homes* focus on rheumatic fever can be referred using the same form. Such cases will be assessed and then linked to either the Regional Public Health *Housing Assessment and Advice Service (HAAS)* (Direct link: [Housing Assessment and Advice Service](#)), or to other local healthy housing programme providers such as 'Warm Fuzzies Wellington', 'Compass Pacific Health Navigators' or city council 'Eco Design Advisors'. *Well Homes* will coordinate links with the most appropriate service in each case.

If you have a family who have housing-related health issues please refer them by emailing [wellhomes@huttvalleydhb.org.nz](mailto:wellhomes@huttvalleydhb.org.nz), or contact the *Well Homes* coordinator on (04) 570 9002.

### Case study

A Māori family with one adult and twin six-year-old children living in a three-bedroom private rental in Porirua were referred after a respiratory admission for one of the children. Two older siblings in the family had moved to stay with extended family due to one of the bedrooms in the home being rendered unhealthy due to mould. The family had set up their living area in the upstairs corridor and slept in the two drier bedrooms. The downstairs living room was not used as it was too cold. The family used an electric heater fixed in the corridor as their main heating source. They used a non-ducted dryer to freshen clothes and as a heating source in the mornings. The family received a disability allowance for power and had prioritised going without food so that they had enough power to provide some heating. The family accessed a food bank when food was short.

The house required extensive maintenance work in and around the house including the fixing of windows, water cylinder insulation, repair of leaks from a water tank in the ceiling, provision of ventilation in the bathroom, ducting the dryer exhaust to the outside and fixing holes in the laundry ceiling.

*Well Homes* advised the tenant how best to keep the home warm, dry and safe given the limitations of the property. *Well Homes* arranged for ceiling insulation, curtains, repairs to guttering and leaks, hot water cylinder wrapping, replacement of damp carpet, mould removal and the installation of ventilation in the bathroom. A fixed heating source was installed downstairs and portable heating was arranged for upstairs. A referral was made for financial support via Work and Income New Zealand.



Figure 1. Extensive harmful mould in the wardrobe in the unused bedroom.



Figure 2. Missing window fittings.

# WELLINGTON REGION TUBERCULOSIS CASES, 2014

Tuberculosis has historically been considered so important that it is the only infectious or notifiable disease with a whole Act of parliament dedicated to it – the Tuberculosis Act 1948 (soon to be repealed and incorporated into the Health Act if the Health (Protection) Amendment Bill passes). The Tuberculosis Act describes the responsibilities of, and powers available to, those involved in the management of cases and contacts of tuberculosis. (Available at: [Tuberculosis Act 1948 at New Zealand Legislation](#)).

## Transmissibility

Tuberculosis is considered to be an airborne pathogen, with very low risk of transmission if a patient is not coughing. However, even if the risk of transmission is very low, treatment is crucial for the individual health of the affected person.

## Treatment

Combination therapy is used to reduce the risk of drug resistance. First line anti-tuberculosis agents include isoniazid, pyrazinamide, ethambutol, and rifampicin. Treatment is usually coordinated by the infectious diseases specialist, respiratory specialist or paediatrician, with public health nurses giving treatment (directly observed therapy (DOT) where required<sup>a</sup>) and organising follow up checks.

## Cases in Wellington, Wairarapa and the Hutt Valley<sup>1</sup>

In 2014 the number of new cases of tuberculosis disease was the highest in ten years (Figure 1). The term 'tuberculosis disease', sometimes referred to as 'active tuberculosis' includes all extra-pulmonary and pulmonary cases of tuberculosis, but does not include cases of latent tuberculosis<sup>b</sup>. There were 51 reported cases of tuberculosis disease in 2014, of which 39 were confirmed by identifying acid fast bacilli, and 12 were considered to be 'probable'. Probable cases may eventuate when it is not possible to sample the affected site, or where samples have been taken but without any laboratory confirmation in the context of strong clinical suspicion.

<sup>a</sup> DOT is the process where a health worker or trained supervisor observes the patient swallowing doses of medication in the course. It is used if there are risk factors for non-adherence, or with other risk factors such as cases of multidrug resistance, or use of complex regimes of medication.

<sup>b</sup> 'Latent TB infection' (LTBI) is the term used to describe a mantoux or quantiferon positive individual who is asymptomatic with no signs of TB disease, and from whom TB organisms cannot be cultured. It is usually thought that such individuals harbour dormant or inactive TB organisms, although this is controversial. Such persons have normal or only trivial changes on chest X-ray, such as a small scar or patch of calcification.

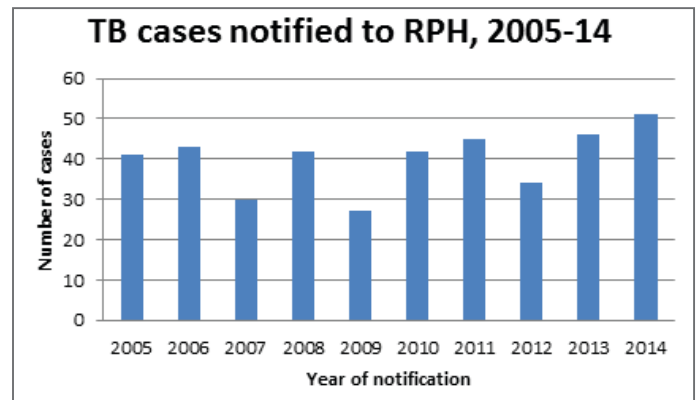


Figure 1.

## Age distribution

The highest incidence of tuberculosis disease was in the 30 to 39 year age group (Figure 2). A small increase in the 70+ age group fits with a national bimodal distribution of TB incidence noted in the 2006 review of Tuberculosis Epidemiology, with peaks in the 20 to 39 years and 70+ age groups<sup>2</sup>. The majority of regional cases in the younger age groups were found to be immigrants from high incidence countries<sup>2</sup>.

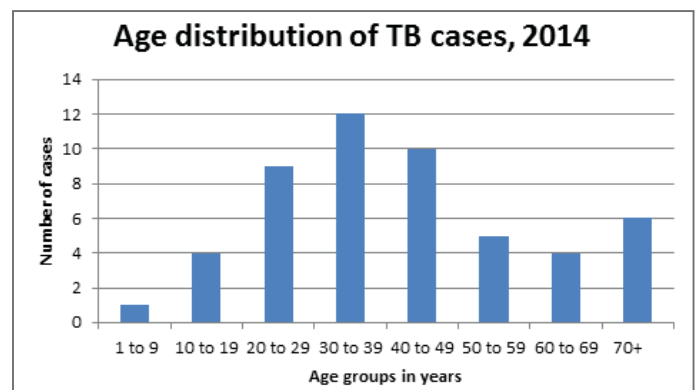


Figure 2.

## Ethnicity

European, Māori and Pacific people present in low absolute numbers compared with people in the 'Other' ethnicity grouping reflecting the high number of TB cases who originate from countries of high TB incidence (Figure 3).

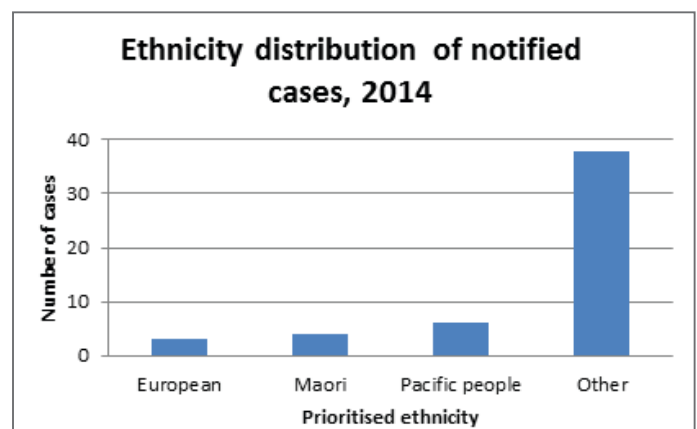


Figure 3.

Looking at ethnicity on a more detailed level (Figure 4), it can be seen that those of Indian, Filipino and Chinese ethnicity are strongly represented in the absolute number of cases. This reflects migration patterns for this time period with India, China, and the Philippines being in the top five source countries of origin for migrants<sup>3</sup>.

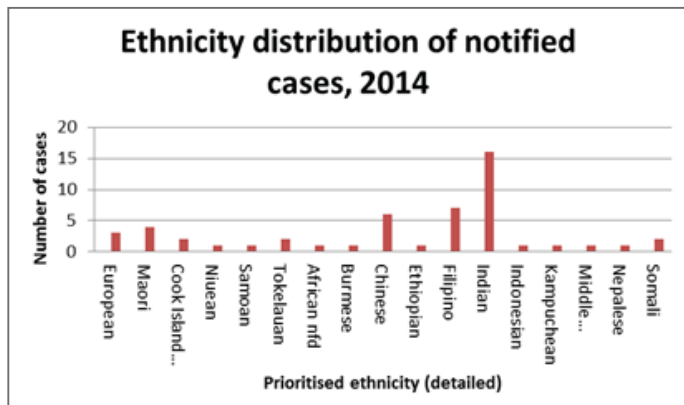


Figure 4.

### Sex distribution

Twenty-eight of the cases were male, and 23 were female.

### Site of disease

Of the 51 cases, 25 had a pulmonary component to the infection and 40 had an extra-pulmonary component. The non-pulmonary sites affected included: lymph nodes (16), pleura (8), bones and joints (3), the central nervous system (2), and genitourinary, peritoneal, eye, soft tissue and skin sites. One case was of miliary tuberculosis.

### Microbiology, antimicrobial resistance and DNA typing

Of the 51 cases, 25 were positive for acid fast bacilli by microscopy, with 38 culture positive.

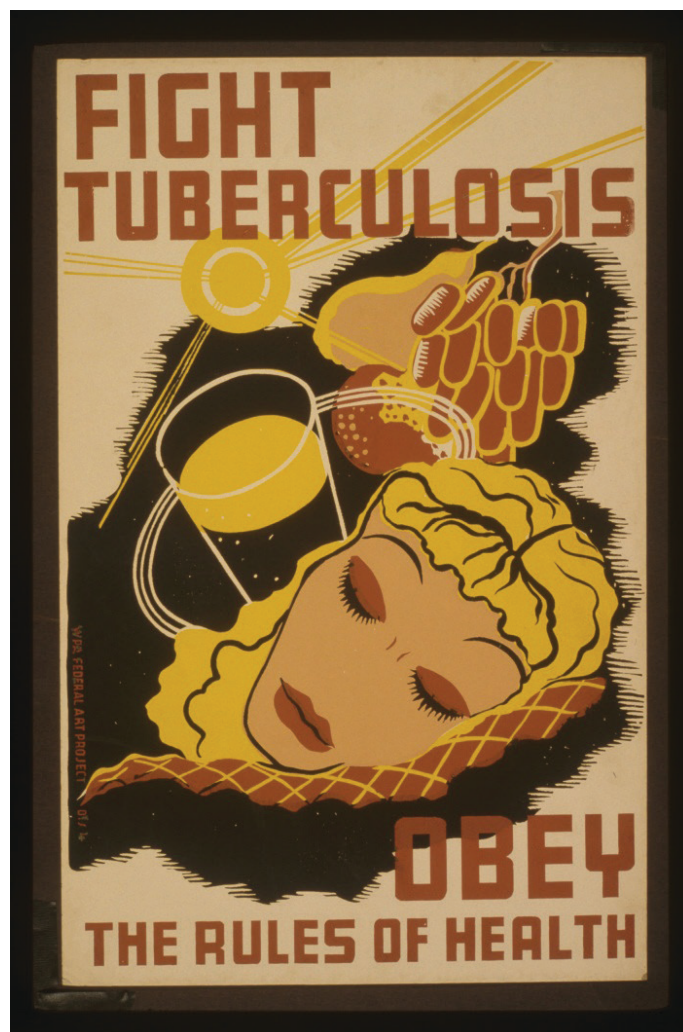
Antimicrobial resistance was present in three cases. Isoniazid resistance was present in 3 cases, pyrazinamide resistance in 1 case and rifampicin resistance in 1 case which was classified as pre-extensive drug resistant (pre-XDR). No ethambutol resistance was detected. Of the 38 culture positive cases, 13 had unique DNA typing. Three cases with the same DNA type were notified in quick succession but investigations were not able to establish any other link between the cases.

### Summary

Tuberculosis disease case numbers are not reducing in the Wellington region, and we can expect to see perhaps one case per week in the region overall, based on current case numbers. Most general practices, of which there are approximately 115 in the region, will therefore statistically not see a case in a year. The epidemiology of cases may give some idea of who is likely to present with tuberculosis, but this is a disease that can present in a myriad of forms

and in any ethnic group. Migrants are clearly a high risk population for this disease. In absolute numbers, India, the Philippines and China are sources of cases in New Zealand. However it is difficult to estimate the numbers of people visiting or migrating to New Zealand so it may be that rates are actually higher in other groups.

Questions about a clinical diagnosis are usually managed by the infectious diseases, respiratory or paediatrics teams in hospital. Questions about monitoring of treatment, or contact tracing are managed by the public health team at Regional Public Health.



Source: [https://upload.wikimedia.org/wikipedia/commons/1/1f/WPA\\_Tuberculosis\\_poster\\_-\\_original.jpg](https://upload.wikimedia.org/wikipedia/commons/1/1f/WPA_Tuberculosis_poster_-_original.jpg)

### Sources

1. Regional Public Health notification data.
2. Das D, Baker M, Calder L 2006. Tuberculosis epidemiology in New Zealand: 1995–2004. *New Zealand Medical Journal* 119(1243): 17-31.
3. Accessed 29/06/2015, from <http://www.enz.org/migrants.html>

# MANAGING CONCERNS ABOUT CHEMICAL EXPOSURES

People are exposed to a myriad of chemicals on a daily basis, though not usually at concentrations or in forms which are directly toxic or clinically relevant. More often than not, these exposures go unnoticed or unappreciated. However, there are instances where a person can have a non-toxic chemical exposure (often referred to as exposure to a nuisance odour) and develop unpleasant symptoms attributable to the exposure (e.g. nausea and headache). Whilst these symptoms are usually non-specific in nature and do not pose a health risk, they can be significant for the individual concerned. Key examples where these sorts of exposure can occur include malodorous discharges from a wastewater treatment plant or landfill operation, or concerns re nearby agricultural spraying. In the primary care setting, it can be difficult to differentiate clinically significant exposures from these unpleasant symptoms. Furthermore, there is a limited utility in routine laboratory testing in these cases. Nevertheless, much useful information can be obtained from taking a clear history and undertaking a thorough examination of the patient. The following figure outlines some of the factors to consider when assessing a patient in primary care who presents with symptoms they associate with a chemical or odour exposure.

**Step 1:** Take a careful history to elucidate more about the exposure and their symptoms. Key questions include:

- What do they think they have been exposed to and how do they know they were exposed?
- When and where did the patient become aware of the exposure (i.e. home or work)?
- What are the patient's symptoms?
- What is the relationship between the exposure and symptoms?
- Is the patient worried that anyone else is exposed?
- Has the patient reported the exposure concern to any agencies?
- What information has the patient been given about the exposure?

**Step 2:** Examine the patient, paying particular attention to vital signs, neurological and gastrointestinal systems.

**Step 3:** Do you suspect that the patient health complaints are directly related to the toxic effects of a specified chemical exposure or does the history suggest a recent or significant exposure?

**YES**

Seek further advice on management of the patient.

**Options include:**

- National Poisons Centre (0800 Poisons).
- TOXINZ database (subscription required).
- Chemical Pathologist.
- Toxicologist.

**And**

Notify the Medical Officer of Health using the HSDIRT notification system (available in MedTech, Profile or My Practice; look for 'hazardous substances and lead poisoning notifications' on the bpac dashboard).

**Options include:**

- The Greater Wellington Regional Council Environmental Help Desk ((04) 830 4255) may be able to provide further information about environmental exposures in the region.
- Discuss concerns/uncertainties with the Medical Officer of Health.

**Useful resources :**

- Lab Investigation of Exposure to metals or other Hazardous substances in the environment <http://www.bpac.org.nz/BT/2013/November/docs/BT21-toxic.pdf>
- Assessing and managing workplace exposure to chemicals <http://www.bpac.org.nz/BT/2014/February/docs/BT22-toxicwork.pdf>

**How to notify:**

<http://www.rph.org.nz/content/d4aa1a9e-78a1-4634-8ae2-a0050a7ef141.cmr>

**3D Health Pathways:**

<http://3d.healthpathways.org.nz> - Public Health - Notifiable Diseases

**UNSURE**

Reassure the patient.

**And**

Advise the patient to document any further symptoms, to record the details of future exposures and to re-present if they have any further concerns.

**And**

If the patient wishes to report an environmental exposure they can contact the Greater Wellington Regional Council Environment Hotline on 0800 496 734. (See link for information on what can be reported: <http://www.gw.govt.nz/report-an-environmental-incident/>)

**NO**

## 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)			
	Hutt	Wairarapa	Wellington	Totals
Campylobacteriosis	31	16	87	<b>134</b>
Chikungunya fever	1		1	<b>2</b>
Cronobacter species			1	<b>1</b>
Cryptosporidiosis	1	1	10	<b>12</b>
Dengue fever			5	<b>5</b>
Gastroenteritis/foodborne intoxication			3	<b>3</b>
Giardiasis	3	1	33	<b>37</b>
Hepatitis C			3	<b>3</b>
Hepatitis NOS		1		<b>1</b>
Invasive pneumococcal disease		2	4	<b>6</b>
Legionellosis	1		2	<b>3</b>
Leptospirosis	1	2		<b>3</b>
Listeriosis			1	<b>1</b>
Pertussis	4 (1)	2 (1)	23 (16)	<b>29 (18)</b>
Salmonellosis	5	2	19	<b>26</b>
Shigellosis	1		2	<b>3</b>
Tuberculosis disease - new case	2		3	<b>5</b>
Typhoid fever			2	<b>2</b>
VTEC/STEC infection		1	2	<b>3</b>
Yersiniosis	5		9	<b>14</b>
<b>Totals</b>	<b>55 (1)</b>	<b>28 (1)</b>	<b>210 (16)</b>	<b>293 (18)</b>

**Table 1. Notifiable cases in the Hutt Valley, Wairarapa and Wellington 01/03/2015 - 31/05/2015.**

#### Notes:

- Two of the cases of shigellosis had clear overseas exposure, and the remaining case was identified after she became unwell during treatment for leprosy. She was likely to have exposure from an overseas visitor though the source was never found.
- A variety of sources were found to be associated with the salmonellosis cases: contact with farm animals, handling home-kill pork, contact with egg contaminated with chicken manure, drinking unfiltered tank water, playing at a dog park, contact with other human cases, and exposure overseas.
- The three STEC/VTEC cases were associated with the consumption of raw milk, contact with a stray cat, and eating unpasteurised cheese.
- The dengue cases all had overseas exposure.
- Several mumps and measles cases were notified and investigated but none turned out to be confirmed cases. The last confirmed case of mumps in the region was in 2013, with a total of only nine cases confirmed since 2009. Confirmation of cases to date has been on the basis of serology alone, without supporting PCR or culture results.
- One tuberculosis case was within an institution requiring extensive screening of contacts.

#### Sources

1. ESR. Episurv database of notifiable conditions accessed 08/06/2015.
2. Regional Public Health surveillance records.

## GOOD COMMUNICATION ABOUT NOTIFIABLE CONDITIONS

In every setting doctors and nurses are reminded of the importance of good communication. Recently the team at Regional Public Health had this starkly illustrated by a person with a notifiable infection who objected to their details having been shared with Regional Public Health.

After the fact, when a person strongly protecting their privacy feels that a violation has occurred, it can be very difficult to persuade them of the value of, and legal requirements for, sharing information to protect the health of the population.

Wherever possible, when giving results about a notifiable condition to patients, or when ordering a test where there is a reasonable possibility of a notifiable condition being found, it is helpful to remind patients that Public Health may need to be notified and may then make direct contact with the patient. This is likely to facilitate greater understanding and support for the role of public health in reducing the impact of notifiable diseases.

Many thanks.

## E-notification of Hazardous Substance Disease and Injury

### The notification process

In MedTech, Profile or My Practice, Hazardous Substances Disease and Injury Reporting Tool (HSDIRT) is a module on the *bestpractice* dashboard. Submitting the short form will send it to the local Medical Officer of Health via a secure system.

Hospitals and primary care practices that do not use MedTech, Profile or My Practice should still inform their Public Health Unit (PHU) of any cases. PHUs will then manually enter relevant details into HSDIRT.



A notification is required even when there has been direct laboratory notification to the PHU. Without it, PHUs will not have all the information needed to follow up the notification.

Once a notification has been received at a PHU, it is reviewed and investigated where necessary. Non-identifiable data is then transferred to the national surveillance system at Massey University.

The reporting tool has been designed by the Centre for Public Health Research (Massey University) and *bestpractice* Decision Support, and funded by the Ministry of Health.







### FURTHER INFORMATION

For questions regarding a patient or notification, please contact your local public health unit.

For more introductory information see the article in the [April 2013 Best Practice Journal](#)

For more articles and training on HSDIRT, see the HSDIRT web page: <http://www.ehinz.ac.nz/our-projects/hazardous-substances/publications>

### Examples of cases that should be reported:

-  A fireworks injury
-  Ingestion of cleaning products or cosmetics by children
-  Overdose with agrichemicals (including spraydrift incidents)
- CO** Carbon monoxide poisoning
-  Illness caused by exposure to solvents or chlorine
-  Contact dermatitis due to chemicals
-  "Huffing" (inhaling) of butane

## 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](mailto: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](mailto: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.**

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