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

July 2014

PENICILLIN PROPHYLAXIS FOR RHEUMATIC FEVER

Reducing the burden of rheumatic heart disease

Much of the current focus on rheumatic fever is targeted at the treatment and prevention of group A streptococcal throat infections.

Once a person has been diagnosed with rheumatic fever however, the individual starts a long and repetitively painful prophylactic treatment. Regular (three to four weekly) long acting penicillin injections reduce the likelihood of further heart damage from repeated rheumatic fever attacks[1].

Bicillin LA is benzathine penicillin, the preparation available for rheumatic fever prophylaxis in New Zealand. Oral erythromycin in two to four divided doses is advised in cases where there is a significant allergy to penicillin[1].

Twice daily oral penicillin treatment may seem attractive to avoid the need for needles, but is not as effective as monthly dosing[1].

The recommended duration of secondary prophylaxis varies depending on the degree of carditis, with a minimum of 10 years from diagnosis, and up to life-long treatment in cases of severe carditis. Detailed recommendations are available in the *Heart Foundation New Zealand Guidelines for Rheumatic Fever*[1].

Delivery in the Wellington region

In Wellington, Hutt Valley and Wairarapa the delivery of penicillin prophylaxis varies by age and region:

Wellington

- Under 16 year olds are followed up by community paediatric nurses.
- 16 – 21 year olds are followed by PHO outreach nurses or by their general practitioner and practice nurses.
- 22 years and over are followed up by their general practitioner and practice nurses.

Hutt Valley

- Under 16 year olds are followed up by community paediatric nurses.

- 16 – 21 year olds are followed up by PHO outreach nurses since 2013, or by their general practitioner and practice nurses.
- 22 years and over are followed up by their general practitioner and practice nurses.

Wairarapa

- Under 16 year olds are followed up by public health nurses.
- 16 – 21 year olds are followed up by public health nurses or their general practitioner and practice nurses.
- 22 years and over are followed up by public health nurses or their general practitioner and practice nurses.

The percentage of missed and late benzathine penicillin doses increases with increasing age group as illustrated by figure 1.

Age group	Cases	Total doses	Total doses late	% late	Total doses missed	% missed
<16	58	615	22	3.6%	3	0.5%
16-21	58	597	68	11.4%	86	14.4%
≥22	25	214	45	21.0%	73	34.1%
Totals	**141**	**1426**	**135**	**9.5%**	**162**	**11.4%**

Figure 1. Late and missed doses of (bicillin) benzathine penicillin prophylaxis by age, 2013. CCDHB, HVDHB, Wairarapa DHB

Smaller numbers of outlying cases are responsible for a substantial number of missed doses, as illustrated by figure 2.

This graph shows the excellent results of an intensive focus in ensuring that the under 16 years old group receive their monthly prophylaxis.

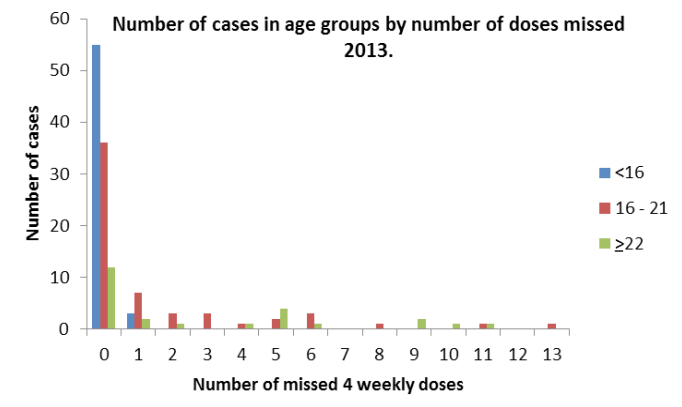
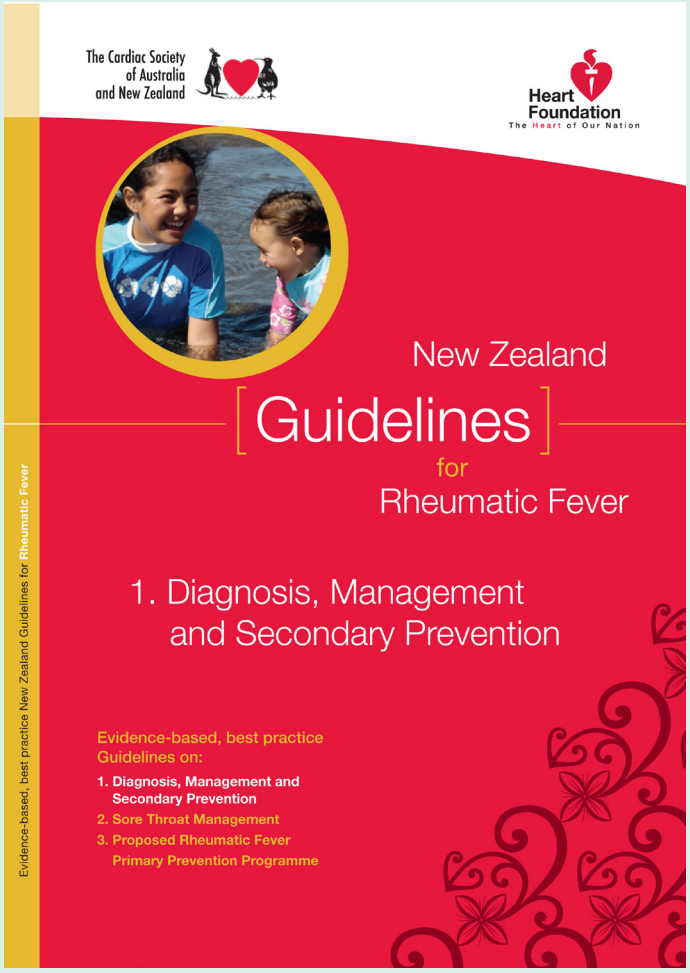


Figure 2. Frequency of missed four weekly bicillin doses per case receiving prophylaxis in 2013, by age group.

Messages for primary care

Primary care practices manage and are responsible for the prophylaxis delivered to adults and some 16 to 21 year olds. It is useful to review the statistics for these age groups, and consider how to improve the delivery of the prophylaxis. It may be possible to gain some insights from the successes of the paediatric community nurses who are managing to catch most of the difficult-to-find teenagers for nearly every dose.

If you need advice, or need to access assistance with your rheumatic fever patients 16 years and over who require monthly dosing, please contact your PHO, or Regional Public Health on (04) 5709002.



Sources

1. Heart Foundation 2006. New Zealand Guidelines for Rheumatic Fever 1. Diagnosis, Management and Secondary Prevention. Available at http://www.world-heart-federation.org/fileadmin/user_upload/documents/RHD-net/AUS_NZ_resources/Guidelines/RHDnet_NZ_RF_GL_1_diagnosis_management_and_2ary_prevention.pdf
2. Regional Public Health notes and records.
3. Bicillin image: https://healthy.kaiserpermanente.org/health/care/consumer/health-wellness/drugs-and-natural-medicines/drug-encyclopedia

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/content/510fd7e9-eba9-4e7b-93f2-3e2718b13838.html**

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). For a list of urgent vs. non-urgent notifications go to **http://www.rph.org.nz/content/77725edc-9633-4143-b161-75a4ca3d2c2b.cmr**
3. Complete all sections of the form found at **http://www.rph.org.nz/content/9bb56554-2f2d-4b09-ad05-bc22074eb102.html**, especially:
    - work/school/early childhood centre information
    - name of parent or guardian for a child under 16 years old.

RESOURCE UPDATE

JULY 2014

New or revised resources are stocked in the Health Information Room, Regional Public Health, Level 1, Community Health Building, Hutt Hospital, High St, Lower Hutt.

To order please contact Laurina Francis:
phone: 04 570 9691, fax: 04 570 9211 or email: laurina.francis@huttvalleydhb.org.nz

Immunise Your Child On Time - Maori

Immunisation information in Te Reo Maori for parents and caregivers, including the recommended ages for babies to receive their immunisations.

Layout: DLE Pamphlet

Source: Health Promotion Agency - HealthEd

Code: HE1531

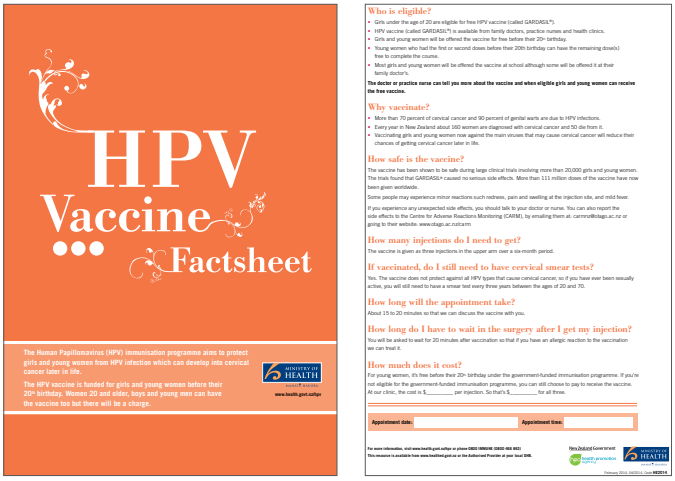
HPV Vaccine Factsheet

Leaflet briefly explaining vaccination against human papillomavirus (HPV), the main cause of cervical cancer, and what the vaccination appointment will involve.

Layout: A4 Sheet

Source: Health Promotion Agency - HealthEd

Code: HE2014



2014 Rheumatic Fever Campaign

Three posters:

- 'My Brother Almost Died - It Started With a Sore Throat' (Samoan and Tongan translations also available)
- 'I Almost Died - It Started With a Sore Throat'
- 'Get Your Child's Sore Throat Checked Now'

Layout: A3 Poster

Source: Health Promotion Agency

Pdf only – we print our own

WHAT ARE YOU REPORTING

1 MARCH 2014 - 1 MAY 2014

Notes:

- A rare strain of salmonella (STM 120) was associated with an outbreak in a North Indian community in the greater Wellington region. Five cases were identified with this infection which is usually acquired overseas, and can be associated with drug resistance (though not in this case). Extensive investigation did not identify the source of infection. No further cases were notified.
- A campylobacter outbreak was associated with one farm distributing raw (unpasteurised) milk in the Wellington region during the three month period. A total of six cases of campylobacter were identified to be associated with raw milk consumption with some additional contacts of cases reportedly having symptoms but without confirmation of a diagnosis. Five of the confirmed cases were exposed to milk from one supplier and three had no other potential source identified. MidCentral Public Health Service has followed up with the farmer and the Ministry of Primary Industries is currently consulting on the sale of raw milk.

Notifiable Condition	Number of cases (confirmed cases only)			
	Hutt	Wairarapa	Wellington	Total
Chikungunya fever	1 (probable)			**1**
Cryptosporidiosis	3	1	8	**12**
Dengue fever	1			**1**
Gastroenteritis - unknown cause			1	**1**
Gastroenteritis / foodborne intoxication			3	**3**
Giardiasis	10	3	28	**41**
Hepatitis A	1		1	**2**
Invasive pneumococcal disease	2	1	4	**7**
Leptospirosis		1		**1**
Listeriosis			1	**1**
Malaria	2			**2**
Measles			1	**1**
Meningococcal disease	1		1	**2**
Paratyphoid fever	1			**1**
Pertussis (additional probable cases in brackets)	4 (5)		10 (9)	**14 (14)**
Rheumatic fever - initial attack			2	**2**
Salmonellosis	4	1	16	**21**
Shingellosis			4	**4**
Tuberculosis disease - new case			7	**7**
Tuberculosis disease - relapse or reactivation			1	**1**
Typhoid fever			1	**1**
VTEC/STEC infection	1		4	**5**
Yersiniosis	3		17	**20**
Zika virus		1		**1**
Totals	**64**	**14**	**218**	**297**

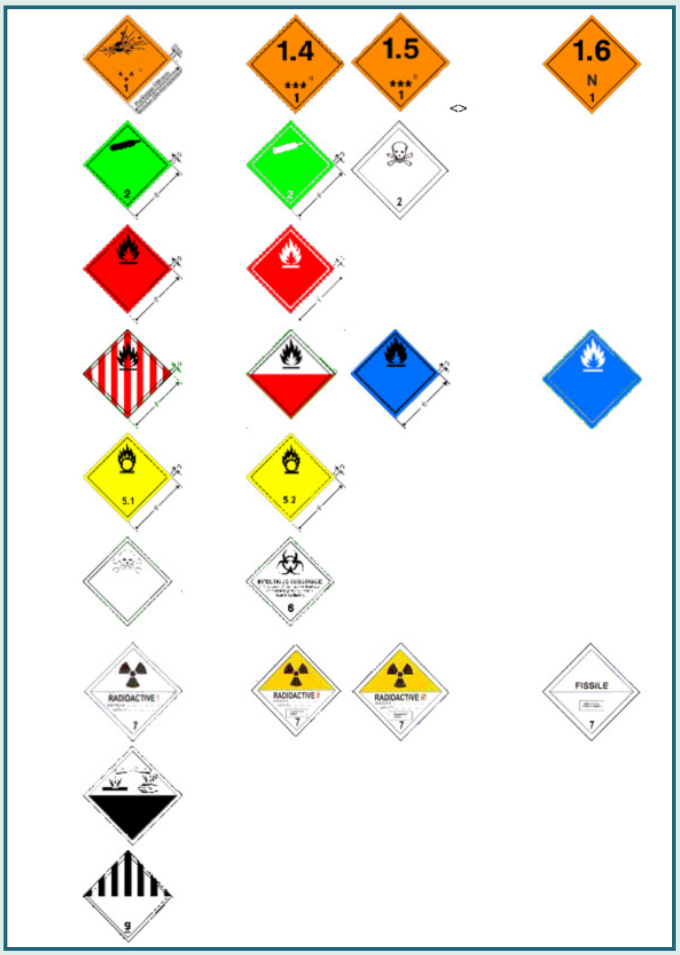
Figure 3. Three months of notifiable cases in the Hutt Valley, Wairarapa and Wellington from 1/3/2014 to 1/5/2014

- The five VTEC / STEC cases in this reporting period were not found to be linked.
- Zika virus is transmitted by mosquitoes, causing a relatively mild dengue-like infection. French Polynesia, The Cook Islands, New Caledonia and Easter Island have had outbreaks in late 2013 and early 2014 with close to 10,000 cases reportedly affected. The case reported to Regional Public Health had dengue-like symptoms, recent probable exposure to Zika virus in Rarotonga and tests for dengue were negative. Zika virus was laboratory confirmed. More information is available about Zika virus at **http://www.health.govt.nz/our-work/diseases-and-conditions/zika-virus**

Sources

1. ESR. Episurv database of notifiable conditions accessed 17/3/2014.
2. Regional Public Health case notes.

CENTRE FOR PUBLIC HEALTH RESEARCH HAZARDOUS SUBSTANCES REPORT RELEASED



In 2005 it became a legal requirement for all medical practitioners to notify a Medical Officer of Health about cases of injury caused by hazardous substances.

To help meet this legal requirement, the Centre for Public Health Research at Massey University, Wellington was contracted by the Ministry of Health to develop the Hazardous Substances Disease and Injury Reporting Tool (HSDIRT). This is based in BPAC (The Best Practice Advocacy Centre) as a tool for primary care notifications. HSDIRT forms part of the Hazardous Substances Surveillance System (HSSS).

The HSSS uses multiple sources of information to contribute to the data:

- mortality data – national mortality collection and coronial services office
- hospital discharges
- lead absorption and poisoning arising from chemical contamination of the environment notifications (notifiable under the Health Act)
- hazardous substance emergency services incident reports
- National Poison Centre calls
- primary care notifications via HSDIRT, which have been more recently added.

In 2014, the first annual report describing exposures and their outcomes was produced. Although this excluded the HSDIRT notifications, the plan is to include these in the next report.

The key findings as reported were:

1. Hazardous substance injury was responsible for 4% of the injury-related health losses in New Zealand.
2. Since 2006, numbers of hazardous substance deaths and hospital discharges have decreased.
3. Between 2006 and 2010, there were no reported hazardous substance deaths of children under five years old.
4. The leading cause of unintentional hazardous substance deaths in the 15-24 year age group was butane inhalation.
5. The majority of fatal and non-fatal hazardous substance injuries were in males.
6. Children less than five years old showed the highest hospital discharge rates for hazardous substance injuries.
7. More than 60% of hazardous substance-related calls to the National Poison Centre were child related.

Mortality data

From 2006 to 2010 an average of 73 people died each year from hazardous substance injuries, with a decreasing trend to 56 in 2010. Males accounted for 82% of the deaths. No children under five years old died from hazardous substance injury. Overall, carbon monoxide was the main substance causing death (277 of the 367 deaths over the five year period).

Hospital discharges

Hospital discharges from hazardous substance injury events have steadily declined since 2006. There were 712 such discharges in 2012 with an average of 770 per year from 2006 to 2012. This is approximately 0.07% of New Zealand hospital discharges. Crude rates for males were double that for females and about half were unintentional poisonings. The highest rates were in the children aged 0-4 years. The most common diagnostic groups were: burns and corrosions (35%) and solvents, hydrocarbons and corrosive substances (26%). Pesticides (commonly organophosphates or carbamates) caused injury in 18% of the cases aged 0-4 years.

The majority of injuries (52.7%) occurred at home. Household chemicals were the most common cause in children for this age group.

Lead poisoning

Adult lead poisoning notifications have risen since 2007, with the main driver being a lowering of the notifiable blood lead level. In 2012, 272 lead absorption cases were notified. In adults working in high risk occupations such as painters, foundry workers, radiator fitters, electricians and electrical engineers and scrap metal workers was the most common risk factor. In children, regularly visiting or living in a pre 1970 building with flaking or chalking paint and/or with recent renovation, was a common risk factor. Wairarapa DHB had the highest lead notification rate in New Zealand for 2012. For more detailed information please see the full report as referenced below.

Primary care notifications

Electronic notification of hazardous substance injuries is now available throughout New Zealand. The reporting tool HSDIRT, was developed by the Centre for Public Health Research, Massey, in collaboration with BPAC and was launched nationwide in 2013. Recently the integrated electronic reporting tool was made available to an extended range of practice management systems including Medtech 32, My Practice and Profile for Windows. Results from this national reporting system are not yet available but are expected to be included in the next annual report.

Further information about HSDIRT is available at **http://www.ehinz.ac.nz/our-projects/hazardous-substances/publications/**

Medical practitioners are required by law to notify hazardous substance injuries, but until the development of HSDIRT the process for how to make a notification has not been entirely clear, and notifications have been sparse.

> *"Improving data collection about hazardous substances by including notifications from general practitioners will result in more complete patterns of disease and injury and enhance the evidence for future prevention"*[1].

Information from HSDIRT is intended to be used in two ways: The Medical Officers of Health and public health units use the information for real-time follow-up of patients and events. The Centre for Public Health Research uses anonymised data for surveillance. Reports are sent to the Ministry of Health and to public health units to support response and prevention initiatives.

Hazardous substances reporting a step forward

The annual report is a useful next step in understanding and reducing injuries due to hazardous substances in New Zealand. For more detail, please visit the Centre for Public Health Research at the link below.

Sources

1. Massey University, Wellington. Centre for Public Health Research. 2013. Annual Hazardous Substances Injury Report 2013. Available at http://www.ehinz.ac.nz/publications/annual-reports/

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 **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 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