Medical Officer of Health
Public Health
ADVICE

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Tuberculosis in Hawke's Bay

Epidemiology

Tuberculosis (TB) is still one of the more common notifiable infectious diseases in Hawke's Bay. In the past five years, 104 new cases and six relapses have been notified – a case every 2-3 weeks. The age-specific rates (figure 1) show a third-world bimodal pattern with higher rates among young adults than the elderly. The highest risk groups are African/Asian and Pacific Islanders (figure 2) though the largest number of cases are among Maori, among whom a virulent and infectious strain is prevalent (called the Rangipo strain). The disease is clustered in suburbs of lower socio-economic status (figure 3). Drug resistant TB is rare in Hawke's Bay which indicates a good standard of clinical care and adherence to treatment.

Figure 1: Average annual rate of Tuberculosis in Hawke's Bay by age group, 1 May 1999 to 30 April 2004

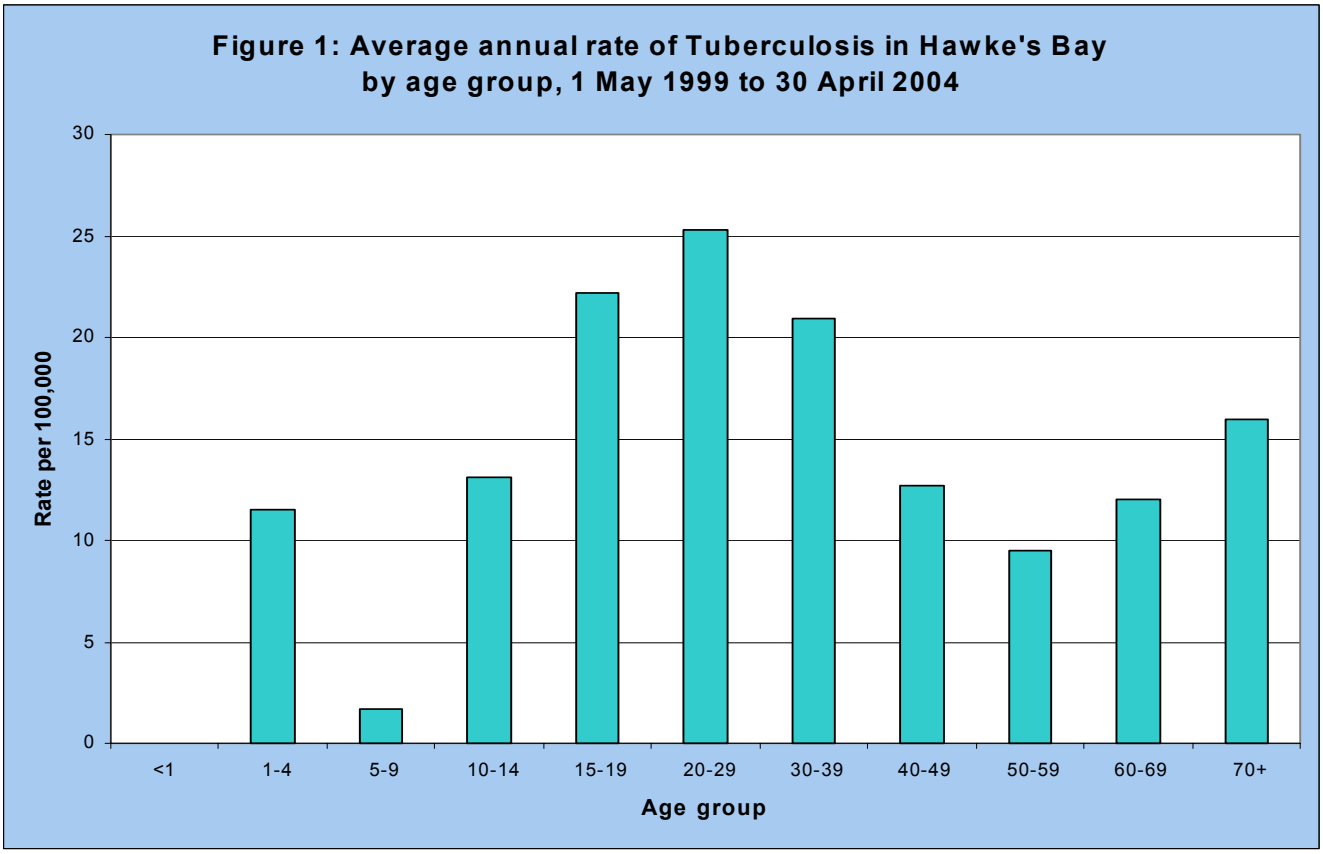
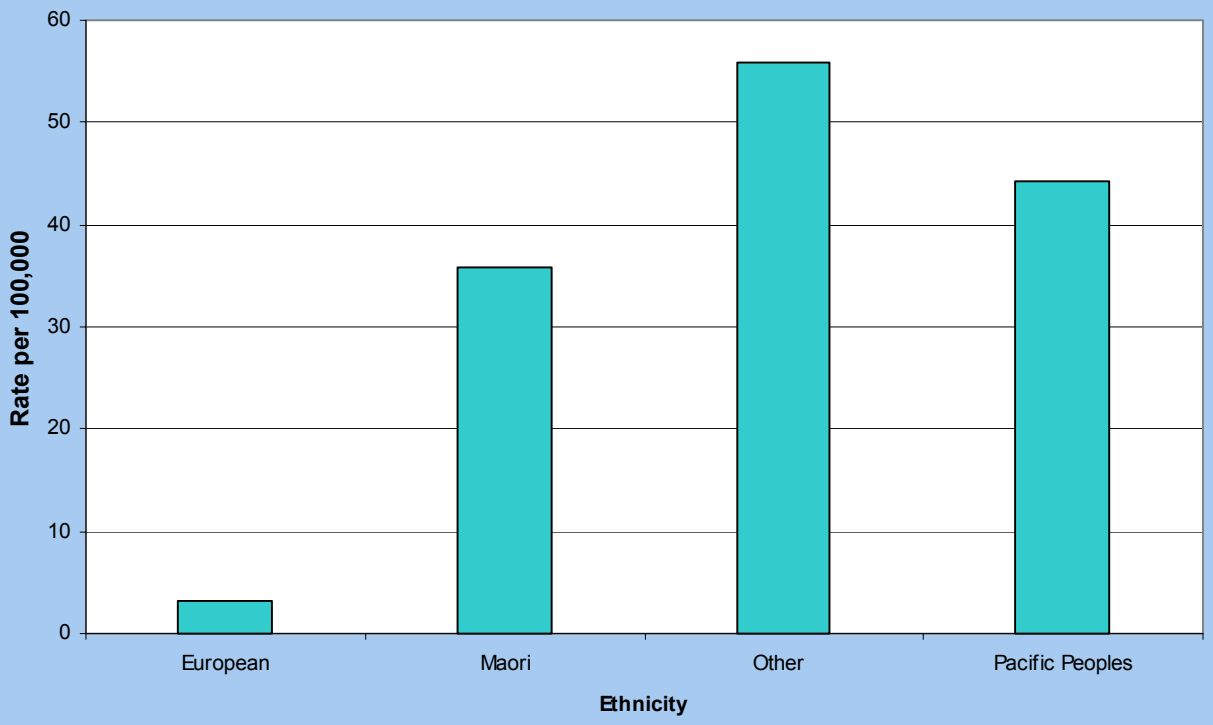


Figure 2: Average annual rate of Tuberculosis in Hawke's Bay by ethnicity, 1 May 1999 to 30 April 2004



Clinical awareness of TB

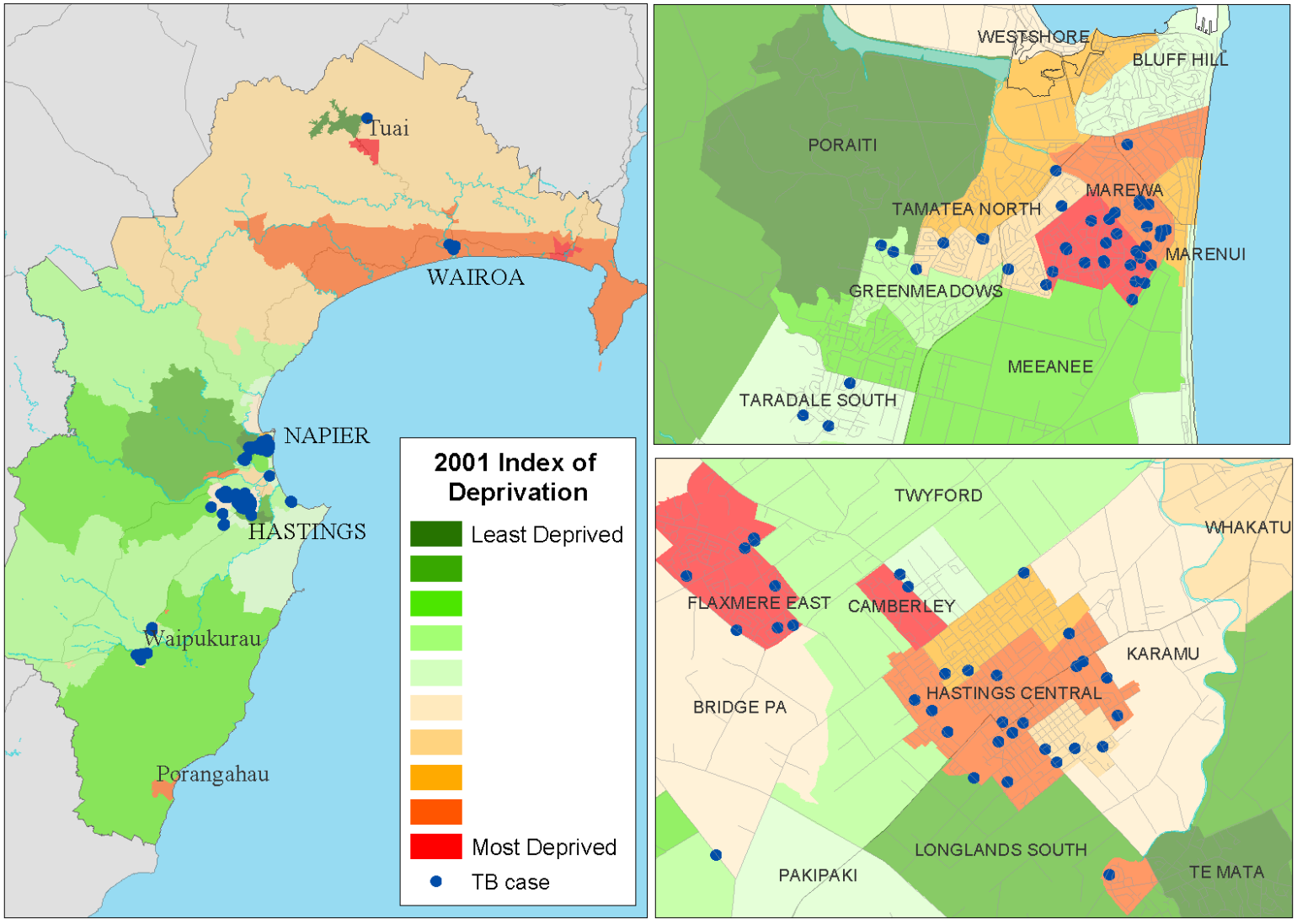
Most TB cases present with symptoms to doctors who need to be vigilant for the disease. Symptoms include cough, haemoptysis, fever, sweats, weight loss, shortness of breath or chest pain. The disease is often silent in the early stages. In young children, the disease may present as meningitis.

High risk groups include: Maori and Pacific people of any age; people who have lived in the Pacific Islands, Asia, Africa or South America; the immune-compromised; the elderly; those recently exposed to TB and those with a past or family history of TB. Consider TB in the high TB-risk patient whose symptoms you are ascribing to asthma, bronchitis or other lung diseases.

Consider sputum microscopy and culture, Mantoux testing, and chest X-ray in high risk patients with symptoms of TB. The most urgent and useful test is the chest X-ray. Discuss with a chest physician without waiting for culture results which may take up to eight weeks. Remember the Mantoux, like any test, may be falsely negative.

Always have a high index of suspicion for the development of TB disease in Mantoux positive patients, particularly if they are immunosuppressed by disease or drugs.

Figure 3: Tuberculosis cases* in Hawke's Bay by domicile and deprivation index of census area unit, 1 May 1999 to 30 April 2004



* Includes new and relapsed cases of active disease; excludes latent infections

The role of Public Health

Public health nurses provide monitoring of adherence to treatment for cases being managed by the hospital. They also follow up contacts of TB cases. If your patients consult you concerning their exposure to a known TB case, please refer them to Public Health without doing Mantoux testing or chest X-ray. Public Health will communicate all abnormal investigations, referrals and treatment to the GP.

BCG vaccination

BCG has limited efficacy and, rarely, significant adverse events (including injection site abscess). It reduces the diagnostic value of the Mantoux test by causing the test to become positive. Because of these disadvantages, vaccination is targeted at those at highest risk. See the Immunisation Handbook for the criteria for vaccination.

It is the responsibility of lead maternity care providers to ensure that BCG eligibility is assessed antenatally and vaccination is arranged postnatally through Public Health. Help parents to book early since vaccinations given before 12 weeks of age do not require pre-vaccinal Mantoux testing.

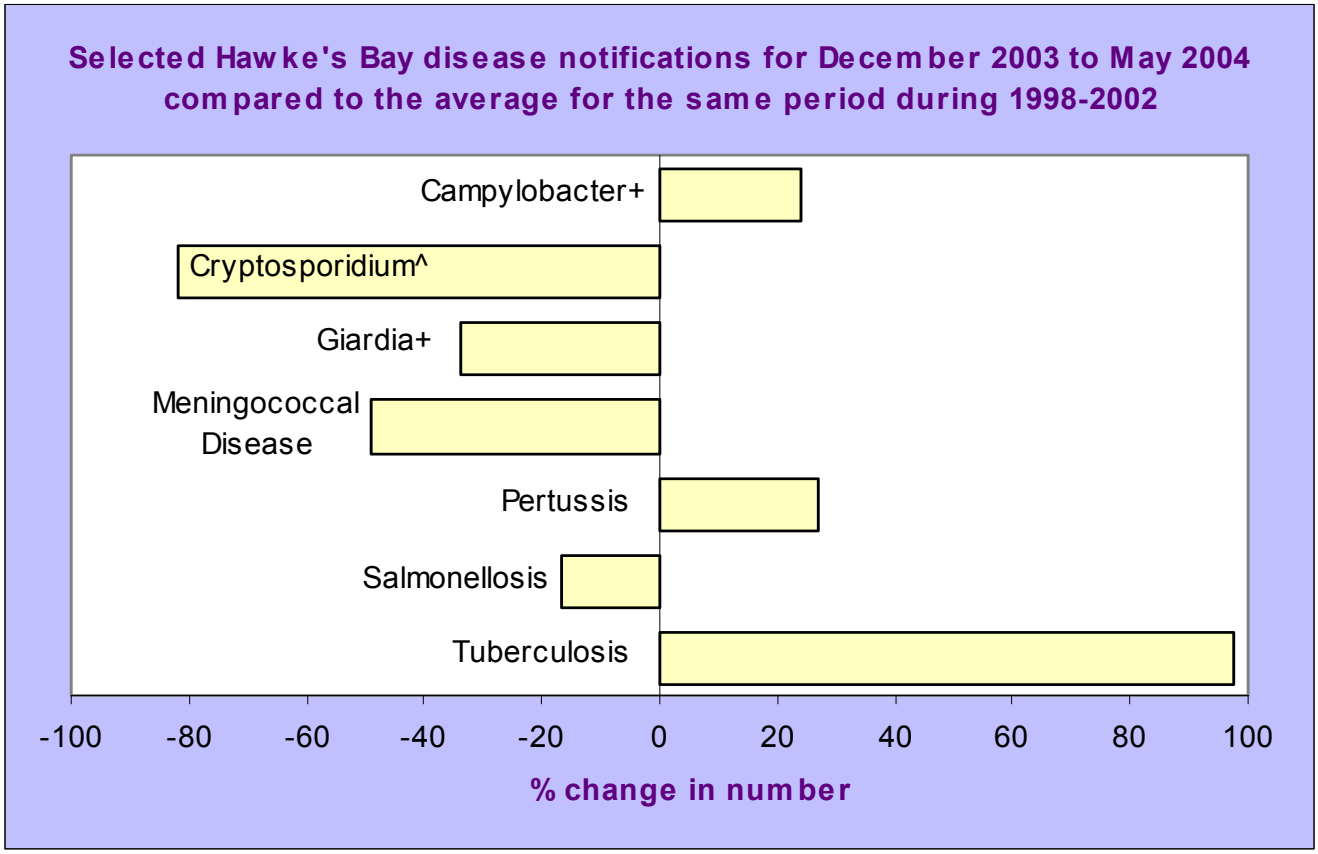
BCG can be given in any time relationship to the other vaccinations which are given in the first year of life.

Weeping lesions with erythema at the injection site are normal. So is axillary adenopathy. Do not prick, squeeze, or treat reactions with any topical preparations. Refer abscesses and accelerated reactions (developing within two days) to Public Health.

There is no evidence for the effectiveness of BCG boosters so they are not recommended. There is no evidence relating the degree of protection either to the size of any subsequent Mantoux reaction or to the presence or absence of any scar formation. Therefore there is no basis for a post-vaccinal Mantoux test or advising vaccinated patients that a post-vaccinal negative Mantoux test suggests that they are not protected and require revaccination.

Guidelines for tuberculosis control in New Zealand 2003 are available on http://www.moh.govt.nz (select the ‘publications by title’ option). Of particular relevance to GPs are chapter 13 (Awareness, clinical features and early diagnosis of TB) and chapter 8 (BCG vaccination).

Disease surveillance summaries



Note: +denotes p<0.05 ^denotes p<0.001

Selected notifications June 2003 to May 2004

Disease	Hawke's Bay		New Zealand	
	Cases	rate*	Cases	rate*
Campylobacter	638	446.2	14189	379.6
Cryptosporidium	51	35.7	688	18.4
Giardia	76	53.1	1609	43.1
Hepatitis A	3	2.1	68	1.8
Hepatitis B	3	2.1	53	1.4
Hepatitis C	2	1.4	44	1.2
Lead Absorption	5	3.5	99	2.6
Leptospirosis	15	10.5	119	3.2
Meningococcal Disease	18	12.6	490	13.1
Paratyphoid	1	0.7	20	0.5
Pertussis	67	46.9	910	24.3
Rheumatic Fever	7	4.9	125	3.3
Salmonellosis	75	52.4	1215	32.5
Shigella	0	0.0	104	2.8
Tuberculosis	25	17.5	410	11.0
Typhoid	1	0.7	22	0.6
Yersinia	23	16.1	484	12.9

* Annualised crude rate per 100,000 population calculated from 2001 census usually resident population.

Commentary on disease surveillance summaries

Another outbreak of **tuberculosis** among young Maori has nearly doubled the number of notifications in recent months. The **typhoid** and **paratyphoid** cases both acquired their disease overseas.

Notification rates for **campylobacter**, **cryptosporidium** and **giardia** continue to be above the national rate. Practitioners are requested to use every opportunity to promote food and drinking water safety with their patients or clients. The decline in the number of **cryptosporidium** cases is due to the fact that there was a significant outbreak in 2001.

Arboviral disease

New Zealand is currently free of arthropod-borne viruses such as Dengue Fever, Ross River Fever (RRF), Japanese encephalitis and Murray Valley encephalitis. MAF border control quite frequently intercepts mosquito vectors. Fortunately in all but one case the mosquitoes have been detected and eliminated before becoming established.

The one exception is the Southern Saltmarsh Mosquito (SSM) (Ochlerotatus camptorhynchus) which was discovered in Napier in 1998, and then further in the other Hawke's Bay sites of Mahia and Porangahau, as well as Gisborne and north of Auckland in the Kaipara region (including Whitford, Mangawhai, and Whangaparoa). The most recent find (May 2004) is near Blenheim.

The SSM is a known transmitter of Ross River Fever (an alphavirus) in Australia. The Ministry of Health initiated an eradication campaign in 1999. So far the mosquito has only been eradicated from Napier and Mahia. Ongoing surveillance for the SSM post-eradication is undertaken by public health.

Arboviral diseases are increasing worldwide. All cases of arboviral diseases so far notified in New Zealand have been imported cases (table 1). Overseas travel will therefore be the main reason for suspecting arboviral disease. However local transmission of RRF for example would be possible if an infected traveller were bitten by a SSM (the average incubation period is 9 days). GPs play a vital part in the early detection of locally transmitted arboviral diseases by being aware of clinical signs and ensuring blood samples are taken for analysis.

Laboratories can arrange for blood samples to be tested for arboviral disease at ESR in Porirua.

The four main clinical syndromes are:

- Acute benign fevers of short duration, with or without an exanthem (e.g Dengue;RRF).
- Polyarthritis and rash, with or without fever and of variable duration, benign or with arthralgic sequelae lasting several weeks to months e.g. Dengue; RRF).
- Haemorrhagic fevers, which include acute febrile illness with extensive haemorrhagic involvement and shock (e.g. Dengue Haemorrhagic Fever and Dengue Shock Syndrome).
- Acute central nervous system disease ranging in severity from mild aseptic meningitis to encephalitis (e.g. Japanese/Murray Valley Encephalitis).

Table 1. Number of notifications of arboviral diseases in NZ (all imported)

Dengue Fever

2003	2002	2001	2000
55	70	93	8

Ross River Fever

2003	2002	2001	2000
1	1	3	3

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Immunisation Issues

Coming events

To register, contact Marg Dalton, Immunisation Coordinator, Phone 8341815 ext. 4228

Vaccinator training course 2 / 3 December 2004.

Venue: Napier Sailing Club. Cost $50.00. Registration form available on request. Prerequites for course: CPR certificate within the last 12 months, Annual Practising Certificate (APC), indemnity insurance - must be organised before course.

Annual update for authorised vaccinators in Hawke's Bay

- 5 August 04, 1200 to 1230hrs, light lunch provided, 1230hrs to 1430hrs inservice. Venue: Maori Health Unit, Omahu Rd, Hawke's Bay Hospital. RSVP by 2nd August. No cost.
- 6 October 04, 1730hrs to 1930hrs. Venue: Napier Sailing Club Rooms. The majority of authorised vaccinators need to apply for reauthorisation this year and a photocopy of your CPR certificate is required with a log, indemnity insurance and APC. No cost.

Immunisation training day for health workers

14 July 04, 0900hrs to 1600hrs, RSVP by 9th July, no cost. Venue: Maori Health Unit, Omahu Rd, Hawke's Bay Hospital. Aim of the course is to increase health workers' knowledge and expertise to enable them to share information with parents/whanau/caregivers to make informed choices relating to vaccination.

Vaccine change

The Ministry of Health announced recently there will be a vaccine product change to DTaP-IPV. From July the new MSD product will be used and is called Quadracell. There are some differences with the Quadracell vaccine as outlined in the data sheet with the packaging. One advantage is the size: it takes about half the storage space of the Infanrix-IPV (GSK) it is replacing. ProPharma will be updating their order sheets in July and an information flyer will be sent out regarding the change with vaccine orders.

MMR and autism debate

Overwhelming evidence from several well designed studies indicates that childhood vaccines and in particular MMR are not associated with autism. This information has been widely publicised but the debate remains the single largest concern for parent callers on the 0800 IMMUNE phone line. Copies of some of the latest research to help support parents in their choice is available through Public Health. There is also a new MMR decision aid available for parents. This is a tool developed in Australia to help parents focus on the issues around MMR. If you get a chance, try working your way through it and please promote it to your concerned parents. http://www.ncirs.usyd.edu.au/decisionaid

Whooping cough (pertussis) is circulating in Hawke's Bay and the rest of New Zealand. Take every opportunity to vaccinate our babies and young children.