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MASSEY UNIVERSITY TE KUNENGA KI PŪREHUROA
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Vector-borne Disease Notifications in New Zealand

NOTIFICATIONS OF VECTOR-BORNE DISEASES

Malaria and dengue fever were the most common vector-borne diseases within New Zealand, accounting for between 82% and 99% of the total notified vector-borne diseases during the period 1997 - 2012 (Table 1).

Ross River virus disease only accounted for a small proportion of total vector-borne disease notifications (Table 1). This may be due to the fact that between 25%–95% of infections of Ross River fever are unapparent (Stürchler 2006), particularly in children (Heymann 2004).

TABLE 1: PERCENTAGE/NUMBER OF NOTIFICATIONS OF VECTOR-BORNE DISEASES IN NEW ZEALAND, 1997-2012

Disease(%)	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total (No.)
Malaria	80.3	73	80.7	85.4	34.8	44.2	44.7	66	64	57.7	17.6	24.1	24.6	38.6	50	31.7	800
Dengue fever	17.3	26	15.8	5.38	60	50.7	53.4	16	22	36.5	80.3	68.7	69	44.7	40.4	64.2	850
Rickettsial disease	1.23	0	0	7.69	3.23	4.35	0.97	4	2	0	0	6.02	2.96	12.3	5.77	3.33	66
Ross River virus	1.23	1	1.75	1.54	1.94	0.72	0.97	10	2	3.85	0	0.6	1.97	4.39	2.88	0.83	32
Cysticercosis	0	0	0	0	0	0	0	0	6	0	1.41	0	0	0	0	0	5
Barmah Forest virus infection	0	0	1.75	0	0	0	0	2	4	0	0	0	0.99	0	0	0	6
Chikungunya fever	0	0	0	0	0	0	0	0	0	0	0.7	0.6	0.49	0	0.96	0	4
Japanese encephalitis	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1
Lyme disease	0	0	0	0	0	0	0	0	0	1.92	0	0	0	0	0	0	1
Total(No.)	81	100	57	130	155	138	103	50	50	52	142	166	203	114	104	120	1765

Source: ESR(2013)

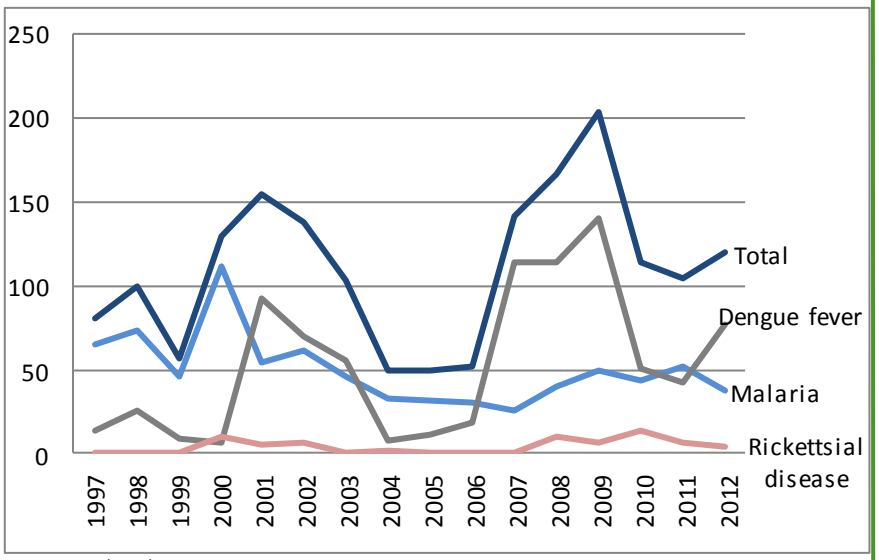
GROWING TREND OF VECTOR-BORNE DISEASES

From 2001 to 2003, the number of cases of vector-borne disease continued to decrease and reached the minimum value of 50 cases per year and stabilised for the next 2 years. The number of cases began to rises again in 2006 (Figure 1).

The annual vector-borne disease notifications reached a peak of 203 cases in 2009 but had declined to 104 cases at 2011. However, in contrast, the total annual notifications of vector-borne disease showed an gradually growing trend and increased to 120 at 2012 (Figure 1).

In 2012, there were 38 cases of malaria, 77 cases of dengue fever, 4 cases of Rickettsial disease and 1 cases of Ross River virus notified in New Zealand (Table 1). Except for dengue fever which had a 83% increase, the other vector-borne diseases showed a declining trend compared to 2011.

FIGURE 1: NUMBER OF NOTIFICATIONS OF VECROR-BORNE DISEASE IN NEW ZEALAND,1997-2012, BY DISEASES



Source: ESR(2013)

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- Heymann DL (ed). 2004. Control of Communicable Diseases Manual (18th edition). Washington, DC: American Public Health Association.
- Stürchler DA. 2006. Exposure: A guide to sources of infections. Washington: ASM Press.
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HIGHLIGHTS:

- Malaria and dengue fever were the most commonly notified vector-borne diseases within New Zealand.
- Between 1997 and 2012, the maximum notifications of vector-borne disease occurred in 2009 with 203 cases, minimum in 2004 and 2005, both with 50 cases.
- In the year 2012, all vector-borne diseases, except dengue fever (83% increase), showed a declining trend compared to 2011.

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