

A Comparison Of Campylobacteriosis Notifications In West Coast Between January – 27 November 2012 And The Same Period 2007-2011

Introduction

An increase in campylobacteriosis notifications in West Coast had been noted in November by Health Protection Officers in West Coast. The Information team was requested to analyse the data to determine whether the increase was related to occupation.

Methods

Campylobacteriosis notification data from EpiSurv¹ was analysed to detect any significant rise in campylobacteriosis incidence this year.

Statistical methods

Rate ratio and 95% confidence interval were calculated to compare the 2012 rate (01 January to 27 November) with the average annual rate of the previous five years (same period 2007-2011). Descriptive analysis were done to examine any difference in disease distribution between 2012 and 2007-2011 according to patient sex, age, occupation, Territorial Authority and urban versus rural dwelling.

Results

From 01 January to 27 November 2012, a total of 65 cases of campylobacteriosis from West Coast were reported in EpiSurv. The campylobacteriosis notification rate of this year (197.6 per 100,000 population) was higher than that of the same period in the previous five years (160.1 per 100,000 population on average). However, this increase was not statistically significant (RR=1.24 95%CI=0.86-1.80) (Table 1).

More males (case=40, 62%) were reported with campylobacteriosis in 2012 compared with the previous five years (case=27, 52% on average), but this difference was not significant (p=0.15) (Table 2). There was no difference in the campylobacteriosis incidence distribution among different age groups between 2012 and 2007-2011 (p=0.61) (Table 3). No age group had a significant higher incidence than previous years.

Thirty-four percent of campylobacteriosis cases in 2012 and twenty percent in 2007-2011 did not have occupational information. The occupational group with the highest campylobacteriosis incidence in 2012 was children under 5 (12.3%), followed by retired people (9.2%), children 5-15 and meat process workers (4.6% each). This pattern was similar to that of 2007-2011, with the highest incidence seen in children under 5 (12.1%) and retired people (8.9%). No particular occupational group in 2012 had unusual high incidence compared with 2007-2011 (Table 4, Table 5).

Table 1. campylobacteriosis notification counts and rates per 100,000 for 2007–2011 (average annual from 01 January to 27 November) and 2012 (from 01 January to 27 November).

Number of notifications		Rate		RR (95%)	P value
2007-2011*	2012	2007-2011 [§]	2012		
51	65	160.1	197.6	1.24 (0.86-1.80)	0.24

*Average annual number from 01 January to 27 November.

[§] Average annual rate per 100,000 population (based on population estimation for 2009).

Table 2. Number of campylobacteriosis cases for 2007–2011 (average annual from 01 January to 27 November) and 2012 (from 01 January to 27 November) by gender.

Gender	2007-2011 N (%)	2012 N (%)	P value*
Male	27 (52%)	40 (62%)	0.15
Female	24 (47%)	24 (37%)	
Unknown	1 (1%)	1 (2%)	

* P value for chi-square test.

Table 3. Number of campylobacteriosis cases for 2007–2011 (average annual from 01 January to 27 November) and 2012 (from 01 January to 27 November) by age groups.

Age groups	2007-2011 N (%)	2012 N (%)	P value*
<1	2 (3%)	4 (6.2%)	0.61
1 to 4	7 (13.2%)	7 (10.8%)	
5 to 14	3 (5.4%)	4 (6.2%)	
15 to 24	8 (16.3%)	14 (21.5%)	
25 to 44	13 (25.7%)	14 (21.5%)	
45 to 64	12 (22.6%)	16 (24.6%)	
65+	6 (12.1)	4 (6.2%)	
Unknown	1 (1.6%)	2 (3.1%)	

* P value for chi-square test.

Table 4. Number of campylobacteriosis cases for 2012 (from 01 January to 27 November) by occupation (only includes occupations with frequency of ≥ 2 notifications).

	Frequency	Percent		Frequency	Percent
Unknown	11	16.9	Miner	2	3.1
Child 5-15	3	4.6	Not stated	10	15.4
Child under 5	8	12.3	Retired	6	9.2
Meat Process Worker	3	4.6	Truck Driver	2	3.1
			Total	65	100.0

Table 5. Cumulative number of campylobacteriosis cases for 2007- 2011 (from 01 January to 27 November) by occupation (only includes occupations with frequency of ≥ 3 notifications).

	Frequency	Percent		Frequency	Percent
Unknown	16	6.2	Miner	4	1.6
At home minding children	3	1.2	Not in the labour force	6	2.3
Beneficiary	3	1.2	Not stated	22	8.6
Carpenter	3	1.2	Not Stated	14	5.4
Chef	3	1.2	Not yet mapped	5	1.9
Child under 16	7	2.7	Nurse	2	.8
Child under 5	31	12.1	Primary school student	4	1.6
Construction Trades Worker	4	1.6	Response not identifiable	3	1.2
Dairy Cattle Farm Worker	10	3.9	Retired	23	8.9
Dairy Cattle Farmer	4	1.6	Sales Assistants and Salespersons	3	1.2
Enrolled Nurse	3	1.2	Student	5	1.9
Farm, Forestry and Garden Worker	3	1.2	Technicians and Trades Workers	3	1.2
Farmer and Farm Manager	3	1.2	Tourist	8	3.1
Manager	5	1.9	Unemployed	4	1.6
Meat Process Worker	3	1.2			
			Total	257	100.0

Table 6. Number of campylobacteriosis cases for 2007–2011 (average annual from 01 January to 27 November) and 2012 (from 01 January to 27 November) by Territorial Authority.

Territorial Authority	2007-2011 N (%)	2012 N (%)	P value*
Buller District	16 (30.4%)	20 (30.8%)	0.39
Grey District	19 (37.0%)	29 (44.6%)	
Westland District	17 (32.7%)	16 (24.6%)	

* P value for chi-square test.

Table 7. Number of campylobacteriosis cases for 2007–2011 (average annual from 01 January to 27 November) and 2012 (from 01 January to 27 November) by urban/rural dwelling.

Dwelling area	N (%)	
	2007-2011	2012
Highly rural area	6 (12.1%)	3 (4.6%)
Independent urban area	26 (49.8%)	15 (23.1%)
Rural area with low urban influence	11 (20.6%)	3 (4.6%)
Rural area with moderate urban influence	3 (5.1%)	4 (6.2%)
Unknown	6 (12.5%)	40 (61.5%)

Conclusions

There has been no significant increase in campylobacteriosis notifications in January to November 2012 compared with the same period 2007-2011. There has been no significant change in the groups most commonly affected (ie, children under 5 years, retired persons, children 5-15 years and meat process workers) or their respective incidence. The proportions of cases in urban and rural areas were similar although over 60% of notifications did not have this data.

References

1. EpiSurv, national notification database. Institute of Environmental Science and Research Limited, Porirua, NZ.

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