

**Laboratory Surveillance of
Chlamydia and Gonorrhoea
in New Zealand**

April to June 2006

Prepared as part of a Ministry of Health
Contract for scientific services

by

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August 2006

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Acknowledgements

The authors wish to acknowledge that this report could not have been generated without the continuing support of the participating laboratories (see Appendix A).

Members of the STI Surveillance Team at ESR who have contributed to the collection, collation, analysis and reporting of data include Dinusha Fernando, Tammy Voice, Kerry Sexton, Graham MacBride-Stewart, Trev Margolin and Pauline Quinn.

**This report is also available at www.surv.esr.cri.nz
Ad Hoc STI requests may be accessed by emailing survqueries@esr.cri.nz**

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Introduction

In New Zealand, sexually transmitted infections (STIs) are not notifiable and so surveillance efforts rely upon laboratories and clinics voluntarily providing data. Laboratory surveillance of gonorrhoea began in the Auckland, Waikato and Bay of Plenty (BOP) regions in 1998. Laboratory surveillance of chlamydia began in the Waikato and BOP regions in 1998 and in the Auckland region in 2001. Since June 2004, efforts have been made to extend STI surveillance to additional laboratories across New Zealand.

This report presents data on chlamydia and gonorrhoea cases reported in the second quarter (April to June) 2006 from forty-two laboratories across New Zealand.

Quarterly reports of clinic-based surveillance are provided separately and are available at www.surv.esr.cri.nz.

All results and analyses are based on data submitted prior to the 1st August 2006. Any data submitted after this date is not included in this report due to time constraints. All results should be regarded as provisional.

Methods

The participating laboratories report anonymised data on laboratory-confirmed cases of chlamydia and gonorrhoea, by age and sex. Laboratories only report specimens received directly from health care settings and do not report data on specimens which were subcontracted to their laboratory from outside of their region. The diagnostic tests used by each laboratory differ.

An attempt has been made to de-duplicate the data where one patient may have multiple positive specimens. If this is not possible then it was assumed that each test-positive specimen was equivalent to one test-positive patient. As it is possible for one patient to have more than one positive specimen taken for the one STI episode, the true incidence may be less than that reported here.

STI Rates

Population-based disease rates for the quarter were calculated by dividing the total number of test-positive reported cases for chlamydia and gonorrhoea by the total 'usually resident' population data for the District Health Boards (DHBs) included in the Auckland, Waikato and BOP regions (see below). Population data was supplied from the 2001 Census, Statistics New Zealand.

For several reasons population-based rates have not been determined for the new laboratories. Data submitted from newly participating laboratories is presented as the number of test-positive reported cases by age and sex. As the majority of laboratories within the new DHBs are not, at present, routinely reporting STI data population rates cannot be calculated accurately.

In contrast to reports prepared prior to 2004 STI rates are not annualised.

<u>Auckland region</u>	Includes Auckland DHB and Counties Manukau DHB for calculation of gonorrhoea rates. Includes Auckland DHB, Counties Manukau DHB and Waitemata DHB for calculation of chlamydia rates.
<u>Waikato region</u>	Includes Waikato DHB.
<u>BOP region</u>	Includes BOP DHB and Lakes DHB.

Data completeness

Chlamydia data

Forty-one laboratories provide chlamydia data for STI surveillance. Of these, thirty-nine laboratories submitted chlamydia data by the date required for all three months of the second quarter (April to June) 2006.

Gonorrhoea data

Thirty-four laboratories provide gonorrhoea data for STI surveillance. Of these, thirty-three laboratories submitted gonorrhoea data by the date required for all three months of the second quarter (April to June) 2006.

Of all test-positive data submitted 1.5% were of unknown age and 0.7% were of unknown sex.

Chlamydia Results – April to June, 2006

Chlamydia Incidence

Auckland Region (see table 1)

- Laboratories in the Auckland region tested 34 184 specimens for chlamydia, of which 2 593 (7.6%) specimens tested positive from 2 470 patients.
- Sixty-four percent of all positive patients were aged 15 to 24 years.
- The highest rates of chlamydia in both females and males were in the 20 to 24 years age group.

Waikato region (see table 1)

- Laboratories in the Waikato region tested 6 185 specimens for chlamydia, of which 631 (10.2%) specimens tested positive from 630 patients.
- Seventy-seven percent of all positive patients were aged 15 to 24 years.
- The highest rate of chlamydia was in the 15 to 19 years age group for females and the 20 to 24 years age group for males.

Bay of Plenty Region (see table 1)

- Laboratories in the BOP region tested 6 108 specimens for chlamydia, of which 707 (11.6%) specimens tested positive from 706 patients.
- Seventy-four percent of all positive patients were aged 15 to 24 years.
- The highest rates of chlamydia in both females and males were in the 15 to 19 years age group.

New laboratories (see table 1)

- New laboratories reported 1 923 (11.0%) test-positive specimens for chlamydia from 1 781 patients.
- Seventy-three percent of all positive patients were aged 15 to 24 years.
- The highest number of chlamydia was in the 15 to 19 years age group for females and the 20 to 24 years age group for males.

Data tables: Chlamydia Incidence, April to June, 2006

Table 1. Number of test-positive cases and rates of chlamydia, age group and sex:
April to June 2006

Region	Age group (Yrs)	Number of test-positive cases				Rate per 100 000		
		Female	Male	Unknown	Total	Female	Male	Total
Auckland	<1	8	6	0	14	84.6	66.4	75.7
	1-9	1	0	0	1	1.2	0.0	0.6
	10-14	33	1	0	34	72.1	2.3	38.0
	15-19	598	121	0	719	1400.8	289.3	850.8
	20-24	665	190	0	855	1635.8	451.3	1033.2
	25-29	286	108	1	395	702.1	239.2	459.9
	30-34	103	74	1	178	225.2	144.5	183.6
	>34	145	124	2	271	55.3	42.6	49.0
	Unknown	0	0	3	3			
Total		1839	624	7	2470	322.5	103.5	210.6
Waikato	<1	2	1	3	6	81.6	42.2	124.5
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	9	1	0	10	67.1	7.6	37.6
	15-19	219	51	1	271	1777.9	438.8	1132.0
	20-24	157	54	4	215	1528.0	532.5	1053.1
	25-29	36	22	1	59	369.9	213.6	294.5
	30-34	26	7	0	33	245.5	59.1	147.1
	>34	20	14	1	35	27.1	17.5	22.7
	Unknown	0	1	0	1			
Total		469	151	10	630	300.5	93.4	198.3
Bay of Plenty	<1	2	1	0	3	95.0	50.1	73.1
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	25	0	0	25	214.5	0.0	108.5
	15-19	313	50	0	363	3330.1	561.5	1983.3
	20-24	124	36	0	160	1801.8	511.3	1149.2
	25-29	58	26	0	84	774.9	308.2	527.6
	30-34	27	8	0	35	310.5	79.8	187.0
	>34	16	15	0	31	24.0	20.4	22.1
	Unknown	3	2	0	5			
Total		568	138	0	706	425.6	98.1	257.5
New Laboratories	<1	4	1	0	5			
	1-9	1	0	0	1			
	10-14	32	1	0	33			
	15-19	627	143	8	778			
	20-24	338	182	4	524			
	25-29	113	84	3	200			
	30-34	40	28	0	68			
	>34	48	41	1	90			
	Unknown	43	34	5	82			
Total		1246	514	21	1781			

Chlamydia trends: Auckland, Waikato and BOP Regions

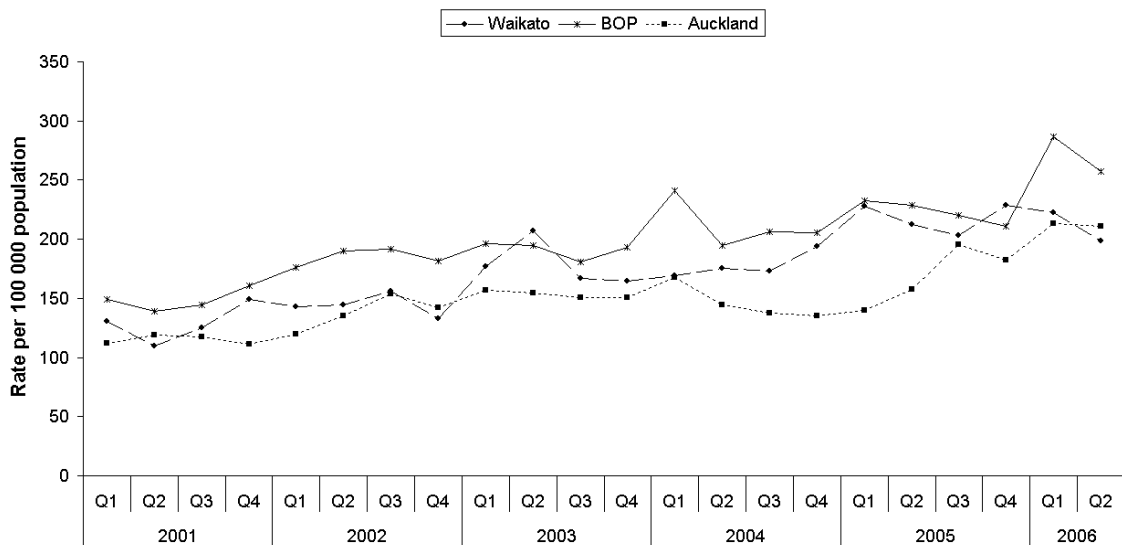
In the second quarter of 2006, a total of 3 806 cases of chlamydia were reported. This represents a rate of 215.6 per 100 000 population (Auckland: 210.6 per 100 000; Waikato: 198.3 per 100 000; BOP: 257.5 per 100 000).

Compared to the previous quarter, the number of chlamydia diagnoses decreased by 1.3% in the Auckland region, 10.8% in Waikato region and 10.1% in the BOP region. Chlamydia rates by quarter since January 2001 are shown in Figure 1.

Chlamydia cases reported in this quarter increased by 20.9% on the total of 3 147 in the equivalent quarter of 2005. The largest increase (33.7%) was seen in the Auckland region (1 847 in Quarter 2 2005, compared to 2 470 in Quarter 2 2006).

The rate of chlamydia in the BOP region was significantly higher than the Waikato and Auckland regions. There was no significant difference in the rate of chlamydia in the Waikato region compared to the Auckland region.

Figure 1. Rate of chlamydia reported through laboratory surveillance in the Auckland, Waikato and BOP regions: January 2001 to June 2006



Gonorrhoea Results – April to June, 2006

Gonorrhoea Incidence

Auckland Region (see table 2)

- Laboratories in the Auckland region tested 54 764 specimens for gonorrhoea, of which 569 (1.0%) specimens tested positive from 256 patients.
- Fifty-seven percent of all positive patients were aged 15 to 24 years.
- The highest rates of gonorrhoea in both females and males were found in the 15 to 19 years age group.

Waikato region (see table 2)

- Laboratories in the Waikato region tested 10 235 specimens for gonorrhoea, of which 127 (1.2%) specimens tested positive from 113 patients.
- Sixty-nine of all positive patients were aged 15 to 24 years.
- The highest rate of gonorrhoea was found in the 15 to 19 years age group for females and the 20 to 24 years age group for males.

Bay of Plenty Region (see table 2)

- Laboratories in the BOP region tested 9 405 specimens for gonorrhoea, of which 89 (0.9%) specimens tested positive from 81 patients.
- Seventy-five percent of all positive patients were aged 15 to 24 years.
- The highest rates of gonorrhoea in both females and males were found in the 15 to 19 years age group.

New laboratories (see table 2)

- New laboratories reported 291 (0.7%) test-positive specimens for gonorrhoea from 242 patients.
- Sixty-nine percent of all positive patients were aged 15 to 24 years.
- The highest number of gonorrhoea was found in the 15 to 19 years age group for females and the 20 to 24 years age group for males.

Data tables: Gonorrhoea Incidence, April to June, 2006

Table 2. Number of test-positive cases and rates of gonorrhoea, age group and sex:
April to June 2006

Region	Age group (Yrs)	Number of test-positive cases				Rate per 100 000		
		Female	Male	Unknown	Total	Female	Male	Total
Auckland	<1	0	0	0	0	0.0	0.0	0.0
	1-9	3	0	0	3	5.6	0.0	2.9
	10-14	6	1	0	7	20.8	3.6	12.4
	15-19	47	35	0	82	173.4	131.0	152.4
	20-24	28	37	0	65	103.0	127.7	115.8
	25-29	9	22	0	31	32.9	72.5	53.8
	30-34	7	14	0	21	23.6	42.3	33.5
	>34	10	37	0	47	6.2	20.7	13.8
	Unknown	0	0	0	0			
	Total	110	146	0	256	30.4	38.2	34.4
Waikato	<1	0	0	0	0	0.0	0.0	0.0
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	0	0	0	0	0.0	0.0	0.0
	15-19	27	11	0	38	219.2	94.6	158.7
	20-24	22	17	1	40	214.1	167.7	195.9
	25-29	2	7	0	9	20.6	67.9	44.9
	30-34	10	6	0	16	94.4	50.6	71.3
	>34	2	8	0	10	2.7	10.0	6.5
	Unknown	0	0	0	0			
	Total	63	49	1	113	40.4	30.3	35.6
Bay of Plenty	<1	0	0	0	0	0.0	0.0	0.0
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	0	0	0	0	0.0	0.0	0.0
	15-19	32	12	0	44	340.5	134.8	240.4
	20-24	8	9	0	17	116.2	127.8	122.1
	25-29	3	7	0	10	40.1	83.0	62.8
	30-34	2	3	0	5	23.0	29.9	26.7
	>34	0	5	0	5	0.0	6.8	3.6
	Unknown	0	0	0	0			
	Total	45	36	0	81	33.7	25.6	29.5
New Laboratories	<1	0	0	0	0			
	1-9	1	1	0	2			
	10-14	1	0	0	1			
	15-19	53	30	0	83			
	20-24	33	50	0	83			
	25-29	6	26	1	33			
	30-34	4	7	0	11			
	>34	5	17	1	23			
	Unknown	3	3	0	6			
	Total	106	134	2	242			

Gonorrhoea trends: Auckland, Waikato and BOP Regions

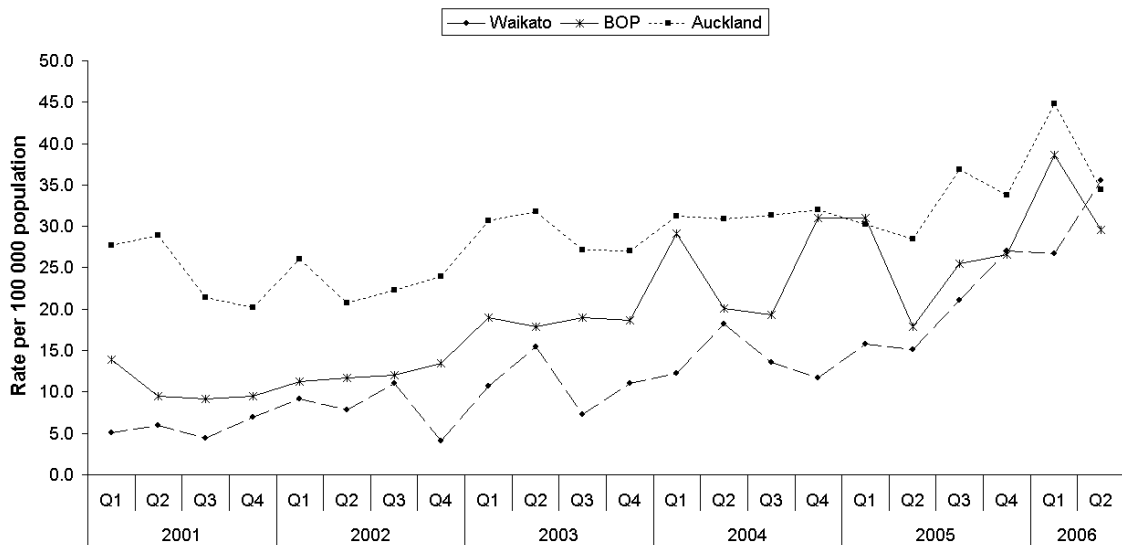
In the second quarter of 2006, a total of 450 cases of gonorrhoea were reported. This represents a rate of 33.7 per 100 000 population (Auckland: 34.4 per 100 000; Waikato: 35.6 per 100 000; BOP: 29.5 per 100 000).

Compared to the previous quarter, the number of gonorrhoea diagnoses increased by 32.9% in the Waikato region. However, the number of gonorrhoea diagnoses decreased by 23.1% in the Auckland region and 23.6% in the BOP region. Gonorrhoea rates by quarter since January 2001 are shown in Figure 2.

Gonorrhoea cases reported in this quarter increased by 45.6% on the total of 309 in the equivalent quarter of 2005. The largest increase (135.4%) was seen in the Waikato region (48 in Quarter 2 2005, compared to 113 in Quarter 2 2006).

There were no significant differences in gonorrhoea rates between the three regions.

Figure 2. Rate of gonorrhoea reported through laboratory surveillance in the Auckland, Waikato and BOP regions: January 2001 to June 2006



Appendix A

STI surveillance data is received from the following laboratories:

- Northland Pathology Laboratory, Northland
- Dargaville Hospital Laboratory, Northland
- Kaitaia Hospital Laboratory, Northland
- Bay of Islands Hospital Laboratory, Northland
- Whangarei Hospital Laboratory, Northland
- North Shore Hospital Laboratory, Waitemata
- Diagnostic MedLab Auckland, Auckland
- LabPlus, Auckland
- Middlemore Hospital Laboratory, Counties-Manukau
- Waikato Hospital Laboratory, Waikato
- MedLab Hamilton, Waikato
- Pathlab Waikato, Waikato
- Te Kuiti Hospital, Waikato
- Thames Hospital, Waikato
- Taumaranui Hospital, Waikato
- Tokoroa Hospital, Waikato
- MedLab Bay of Plenty, Bay of Plenty
- Whakatane Hospital Laboratory, Bay of Plenty
- Rotorua Diagnostic Laboratory, Lakes
- Rotorua Hospital Laboratory, Lakes
- Gisborne Hospital Laboratory, Tairāwhiti
- MedLab Gisborne, Tairāwhiti
- Hastings Southern Community Laboratory, Hawke's Bay
- MedLab Hawke's Bay, Hawke's Bay
- Taranaki MedLab, Taranaki
- MedLab Central, Mid Central
- Hutt Hospital Laboratory, Hutt Valley
- Medical Laboratory Wellington, Capital and Coast
- Kapiti Southern Community Laboratory, Capital and Coast (began reporting in May 2006)
- Grey Hospital Laboratory, West Coast
- Canterbury Health Laboratories, Canterbury
- Christchurch Southern Community Laboratory, Canterbury
- Ashburton Southern Community Laboratory, Canterbury
- Oamaru Southern Community Laboratory, Otago
- Dunedin Southern Community Laboratory, Otago
- Alexandra Southern Community Laboratory, Otago (closed beginning of June 2006)
- Balclutha Southern Community Laboratory, Otago
- Clyde Southern Community Laboratory, Otago
- Queenstown Southern Community Laboratory, Southland
- HealthLab Kew (Southland Hospital), Southland
- Invercargill Southern Community Laboratory, Southland
- Gore Southern Community Laboratory, Southland