

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

January to March 2008

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by

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**This report is available on the Internet at www.surv.esr.cri.nz
Ad Hoc STI data requests may be emailed to 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 first quarter (January to March) 2008 from forty 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 9th May 2008. 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 2006 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.
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<u>Waikato region</u>	Includes Waikato DHB.
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<u>BOP region</u>	Includes BOP DHB and Lakes DHB.
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Data completeness

Chlamydia data

Thirty-seven laboratories provide chlamydia data for STI surveillance. All 37 laboratories submitted chlamydia data by the date required for all three months of the first quarter (January to March) 2008.

Gonorrhoea data

Thirty-two laboratories provide gonorrhoea data for STI surveillance. All 32 laboratories submitted gonorrhoea data for the first quarter (January to March) 2008. 1/32 (3.1%) of laboratories were not able to provide gonorrhoea data by the date required for all three months in this quarter.

Of all test-positive data submitted 1.3% were of unknown age and 0.4% were of unknown sex.

Chlamydia Results – January to March, 2008

Chlamydia Incidence

Auckland Region (see table 1)

- Laboratories in the Auckland region tested 36 751 specimens for chlamydia, of which 2 682 (7.3%) specimens tested positive from 2 534 patients.
- Sixty-five 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 6 733 specimens for chlamydia, of which 739 (11.0%) specimens tested positive from 735 patients.
- Seventy-four 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 7 234 specimens for chlamydia, of which 887 (12.3%) specimens tested positive from 885 patients.
- Seventy-five 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.

New laboratories (see table 1)

- New laboratories reported 2 201 (11.4%) test-positive specimens for chlamydia from 2 078 patients.
- Seventy-one percent of all positive patients were aged 15 to 24 years.
- The highest number of chlamydia cases was found in the 15 to 19 years age group for females and the 20 to 24 years age group for males.

Data tables: Chlamydia Incidence, January to March, 2008

Table 1. Number of test-positive cases and rates of chlamydia, age group and sex:
January to March 2008

Region	Age group (Yrs)	Number of test-positive cases				Rate per 100 000		
		Female	Male	Unknown	Total	Female	Male	Total
Auckland	<1	7	10	0	17	72.1	98.1	85.4
	1-9	0	1	0	1	0.0	1.1	0.6
	10-14	18	2	1	21	36.6	3.9	20.8
	15-19	662	124	1	787	1334.7	244.2	784.0
	20-24	678	188	2	868	1342.0	382.3	870.7
	25-29	296	113	3	412	627.3	260.9	455.2
	30-34	116	72	0	188	220.1	153.2	188.6
	>34	134	101	0	235	40.1	33.4	36.9
	Unknown	3	2	0	5	-	-	-
	Total	1914	613	7	2534	282.9	95.4	192.1
Waikato	<1	3	0	0	3	121.8	0.0	60.1
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	13	3	0	16	98.3	21.1	58.3
	15-19	264	55	0	319	2045.6	418.2	1224.1
	20-24	157	68	1	226	1395.9	585.4	988.5
	25-29	57	38	0	95	569.9	393.4	483.2
	30-34	27	13	0	40	238.7	127.4	185.9
	>34	19	15	0	34	21.1	18.3	19.8
	Unknown	1	1	0	2	-	-	-
	Total	541	193	1	735	312.5	116.2	216.7
Bay of Plenty	<1	5	1	0	6	244.0	46.0	142.0
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	31	0	0	31	262.9	0.0	128.8
	15-19	401	39	1	441	4014.0	370.4	2149.1
	20-24	164	59	0	223	2252.4	811.0	1532.0
	25-29	64	25	0	89	822.4	348.4	594.9
	30-34	35	13	0	48	363.6	154.2	265.8
	>34	21	19	0	40	25.3	25.4	25.4
	Unknown	0	0	7	7	-	-	-
	Total	721	156	8	885	478.9	109.3	301.8
New Laboratories	<1	9	4	1	14			
	1-9	2	0	0	2			
	10-14	36	4	0	40			
	15-19	702	164	2	868			
	20-24	438	174	0	612			
	25-29	155	92	1	248			
	30-34	59	49	0	108			
	>34	63	44	1	108			
	Unknown	40	34	4	78			
	Total	1504	565	9	2078			

Chlamydia trends: Auckland, Waikato and BOP Regions

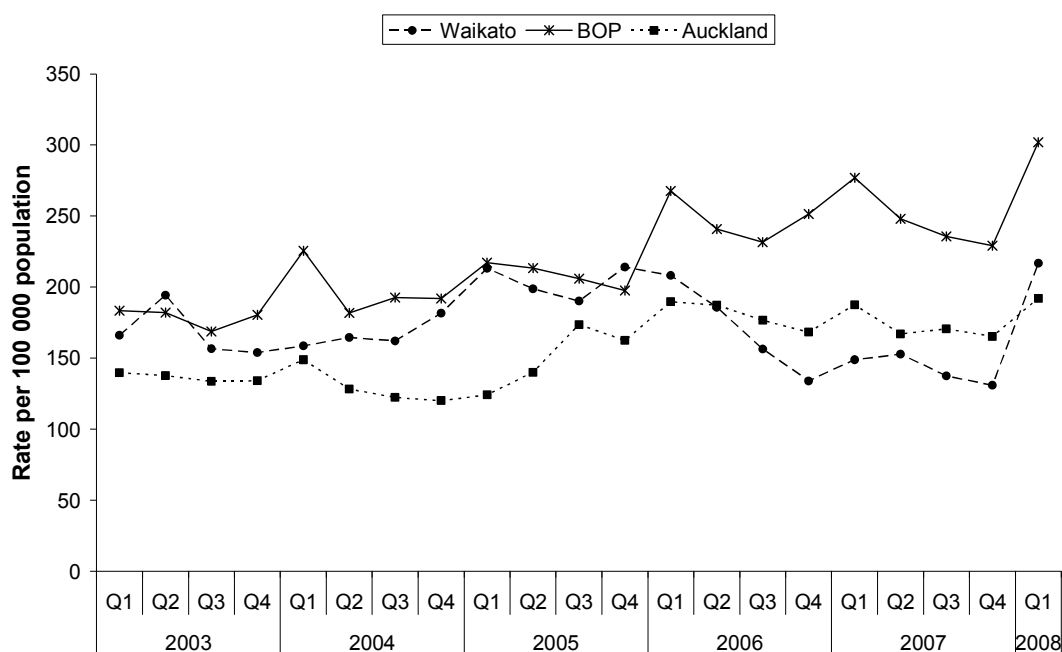
In the first quarter of 2008, a total of 4 154 cases of chlamydia were reported. This represents a rate of 212.8 per 100 000 population (Auckland: 192.1 per 100 000; Waikato: 216.7 per 100 000; BOP: 301.8 per 100 000).

Compared to the previous quarter, the number of chlamydia diagnoses increased by 16.2% in the Auckland region, 65.5% in the Waikato region and 31.7% in the BOP region. Chlamydia rates by quarter since January 2003 are shown in Figure 1.

Chlamydia cases reported in this quarter increased by 9.6% on the total of 3 789 in the equivalent quarter of 2007. The largest increase (45.5%) was seen in the Waikato region (505 in Quarter 1 2007, compared to 735 in Quarter 1 2008).

The rate of chlamydia in the BOP region was significantly higher than the Auckland and Waikato regions. The rate of chlamydia in the Auckland region was significantly lower than the Waikato region.

Figure 1. Rate of chlamydia reported through laboratory surveillance in the Auckland, Waikato and BOP regions: January 2003 to March 2008



Gonorrhoea Results – January to March, 2008

Gonorrhoea Incidence

Auckland Region (see table 2)

- Laboratories in the Auckland region (excluding Middlemore Hospital Laboratory) tested 57 719 specimens for gonorrhoea, of which 580 (1.0%) specimens tested positive from 274 patients.
- Sixty percent 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.

Waikato region (see table 2)

- Laboratories in the Waikato region tested 5 581 specimens for gonorrhoea, of which 61 (1.1%) specimens tested positive from 60 patients.
- Sixty-two percent of all positive patients were aged 15 to 24 years.
- The highest rates of gonorrhoea in both females and males were in the 15 to 19 years age group.

Bay of Plenty Region (see table 2)

- Laboratories in the BOP region tested 5 048 specimens for gonorrhoea, of which 70 (1.4%) specimens tested positive from 69 patients.
- Eighty percent 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.

New laboratories (see table 2)

- New laboratories reported 336 (1.1%) test-positive specimens for gonorrhoea from 306 patients.
- Seventy-three percent of all positive patients were aged 15 to 24 years.
- The highest number of gonorrhoea cases in both females and males were in the 15 to 19 years age group.

Data tables: Gonorrhoea Incidence, January to March, 2008

Table 2. Number of test-positive cases and rates of gonorrhoea, age group and sex:
January to March 2008

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	0	0	0	0	0.0	0.0	0.0
	10-14	4	1	0	5	12.8	3.0	7.8
	15-19	47	29	0	76	147.3	89.6	118.2
	20-24	34	54	0	88	97.4	162.9	129.3
	25-29	16	15	2	33	49.3	50.7	53.2
	30-34	9	21	0	30	26.1	68.2	46.0
	>34	7	35	0	42	3.4	18.8	10.8
	Unknown	0	0	0	0	-	-	-
	Total	117	155	2	274	27.2	38.0	32.7
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	3	0	0	3	22.7	0.0	10.9
	15-19	12	12	0	24	93.0	91.2	92.1
	20-24	5	8	0	13	44.5	68.9	56.9
	25-29	7	6	0	13	70.0	62.1	66.1
	30-34	2	1	0	3	17.7	9.8	13.9
	>34	1	3	0	4	1.1	3.7	2.3
	Unknown	0	0	0	0	-	-	-
	Total	30	30	0	60	17.3	18.1	17.7
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	18	15	0	33	180.2	142.5	160.8
	20-24	5	17	0	22	68.7	233.7	151.1
	25-29	3	5	0	8	38.6	69.7	53.5
	30-34	1	2	0	3	10.4	23.7	16.6
	>34	0	3	0	3	0.0	4.0	1.9
	Unknown	0	0	0	0	-	-	-
	Total	27	42	0	69	17.9	29.4	23.5
New Laboratories	<1	0	0	0	0			
	1-9	0	0	0	0			
	10-14	3	1	0	4			
	15-19	69	57	0	126			
	20-24	41	56	0	97			
	25-29	11	28	0	39			
	30-34	7	12	0	19			
	>34	4	17	0	21			
	Unknown	0	0	0	0			
	Total	135	171	0	306			

Gonorrhoea trends: Auckland, Waikato and BOP Regions

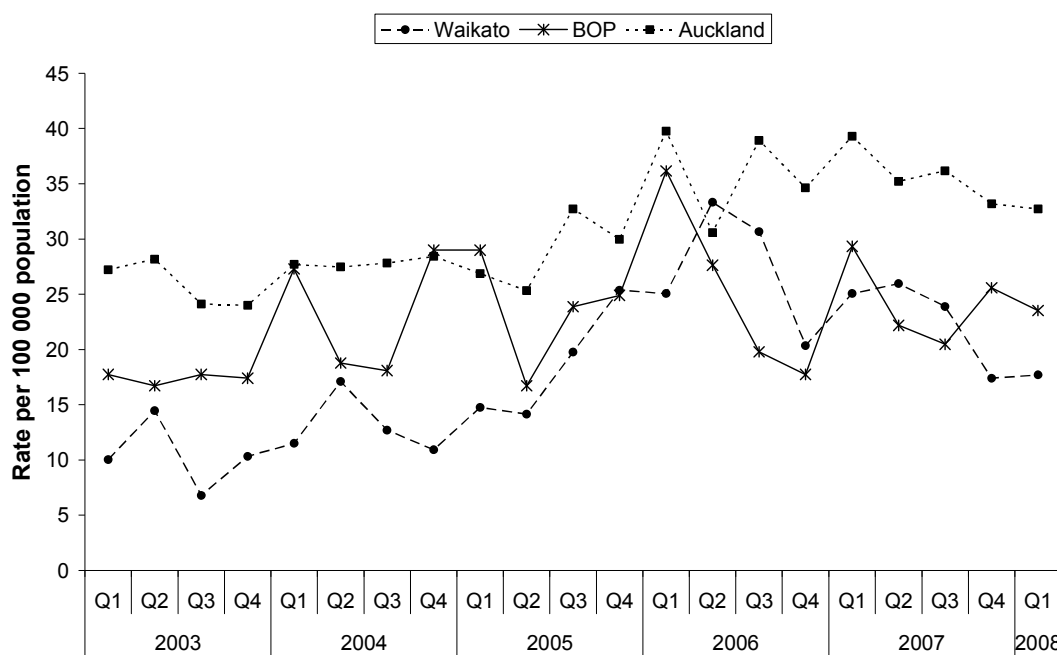
In the first quarter of 2008, a total of 403 cases of gonorrhoea were reported. This represents a rate of 27.4 per 100 000 population (Auckland: 32.7 per 100 000; Waikato: 17.7 per 100 000; BOP: 23.5 per 100 000).

Compared to the previous quarter, the number of gonorrhoea diagnoses decreased by 1.4% in the Auckland region and 8.0% in the BOP region. However, the number of gonorrhoea diagnoses increased by 1.7% in the Waikato region. Gonorrhoea rates by quarter since January 2003 are shown in Figure 2.

Gonorrhoea cases reported in this quarter decreased by 19.4% on the total of 500 in the equivalent quarter of 2007. The largest decrease (29.4%) was seen in the Waikato region (85 in Quarter 1 2007, compared to 60 in Quarter 1 2008).

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

Figure 2. Rate of gonorrhoea reported through laboratory surveillance in the Auckland, Waikato and BOP regions: January 2003 to March 2008



Appendix A

STI surveillance data is received from the following laboratories:

- Northland Pathology Laboratory, Northland
- Dargaville Hospital Laboratory, Northland (Chlamydia only)
- Kaitaia Hospital Laboratory, Northland (Chlamydia only)
- Bay of Islands Hospital Laboratory, Northland (Chlamydia only)
- Whangarei Hospital Laboratory, Northland (Chlamydia only)
- North Shore Hospital Laboratory, Waitemata (Chlamydia only)
- 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 (Chlamydia only)
- Taumaranui Hospital, Waikato (Chlamydia only)
- Tokoroa Hospital, Waikato (Chlamydia only)
- MedLab Bay of Plenty, Bay of Plenty
- Whakatane Hospital Laboratory, Bay of Plenty
- Rotorua Diagnostic Laboratory, Lakes
- Rotorua Hospital Laboratory, Lakes
- Taupo Southern Community Laboratory, Lakes (started Jan 2008)
- Gisborne Hospital Laboratory, Tairāwhiti (Gonorrhoea only)
- Hastings Southern Community Laboratory, Hawke's Bay
- Hawke's Bay Hospital, Hawke's Bay
- Taranaki MedLab, Taranaki
- MedLab Central, Mid Central
- Hutt Hospital Laboratory, Hutt Valley
- Aotea Pathology, Capital and Coast/Hutt Valley (Gonorrhoea only)
- Grey Hospital Laboratory, West Coast
- Canterbury Health Laboratories, Canterbury
- Christchurch Southern Community Laboratory, Canterbury
- Ashburton Southern Community Laboratory, Canterbury
- Oamaru Southern Community Laboratory, Otago
- Otago Southern Community Laboratory, Otago
- Balclutha Southern Community Laboratory, Otago
- Clyde Southern Community Laboratory, Otago
- Queenstown Southern Community Laboratory, Southland
- Kew Southern Community Laboratory (Southland Hospital), Southland
- Invercargill Southern Community Laboratory, Southland
- Gore Southern Community Laboratory, Southland