

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

July to September 2007

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by

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

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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 third quarter (July to September) 2007 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 5th November 2007. 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.
<u>Waikato region</u>	Includes Waikato DHB.
<u>BOP region</u>	Includes BOP DHB and Lakes DHB.

Data completeness

Chlamydia data

Thirty-nine laboratories provide chlamydia data for STI surveillance. Of these, thirty-six laboratories submitted chlamydia data by the date required for all three months of the third quarter (July to September) 2007.

Gonorrhoea data

Thirty-two laboratories provide gonorrhoea data for STI surveillance. Of these, twenty-nine laboratories submitted gonorrhoea data by the date required for all three months of the third quarter (July to September) 2007.

Of all test-positive data submitted 1.5% were of unknown age and 0.5% were of unknown sex.

Chlamydia Results – July to September, 2007

Chlamydia Incidence

Auckland Region (see table 1)

- Laboratories in the Auckland region tested 35 026 specimens for chlamydia, of which 2 361 (6.7%) specimens tested positive from 2 251 patients.
- Sixty-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.

Waikato region (see table 1)

- Laboratories in the Waikato region tested 6 960 specimens for chlamydia, of which 466 (6.7%) specimens tested positive from 466 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 6 077 specimens for chlamydia, of which 694 (11.4%) specimens tested positive from 691 patients.
- Seventy-eight 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 2 042 (10.6%) test-positive specimens for chlamydia from 1 933 patients.
- Seventy-two percent of all positive patients were aged 15 to 24 years.
- The highest number of chlamydia cases in both females and males were found in the 15 to 19 years age group

Data tables: Chlamydia Incidence, July to September, 2007

Table 1. Number of test-positive cases and rates of chlamydia, age group and sex:
July to September 2007

Region	Age group (Yrs)	Number of test-positive cases				Rate per 100 000		
		Female	Male	Unknown	Total	Female	Male	Total
Auckland	<1	15	13	1	29	154.5	127.5	145.8
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	24	2	1	27	48.8	3.9	26.7
	15-19	588	128	2	718	1 185.5	252.0	715.2
	20-24	543	185	2	730	1 074.8	376.2	732.3
	25-29	276	105	1	382	584.9	242.4	422.1
	30-34	101	77	2	180	191.7	163.9	180.6
	>34	105	78	0	183	31.4	25.8	28.8
	Unknown	0	0	2	2			
	Total	1 652	588	11	2 251	244.1	91.5	170.6
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	10	0	0	10	75.6	0.0	36.5
	15-19	162	46	0	208	1 255.2	349.8	798.1
	20-24	108	41	0	149	960.3	353.0	651.7
	25-29	30	12	1	43	299.9	124.2	218.7
	30-34	13	9	0	22	114.9	88.2	102.2
	>34	14	13	0	27	15.6	15.9	15.7
	Unknown	0	1	3	4			
	Total	340	122	4	466	196.4	73.5	137.4
Bay of Plenty	<1	1	1	0	2	48.8	46.0	47.3
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	27	0	0	27	228.9	0.0	112.2
	15-19	309	37	0	346	3 093.1	351.4	1 686.2
	20-24	140	52	0	192	1 922.8	714.8	1 319.0
	25-29	49	19	0	68	629.7	264.8	454.5
	30-34	23	5	0	28	238.9	59.3	155.1
	>34	17	10	0	27	20.5	13.4	17.1
	Unknown	0	1	0	1			
	Total	566	125	0	691	375.9	87.6	235.6
New Laboratories	<1	3	4	2	9			
	1-9	5	0	0	5			
	10-14	44	4	0	48			
	15-19	652	178	1	831			
	20-24	381	174	2	557			
	25-29	127	79	1	207			
	30-34	67	40	0	107			
	>34	51	32	3	86			
	Unknown	42	41	0	83			
	Total	1 372	552	9	1 933			

Chlamydia trends: Auckland, Waikato and BOP Regions

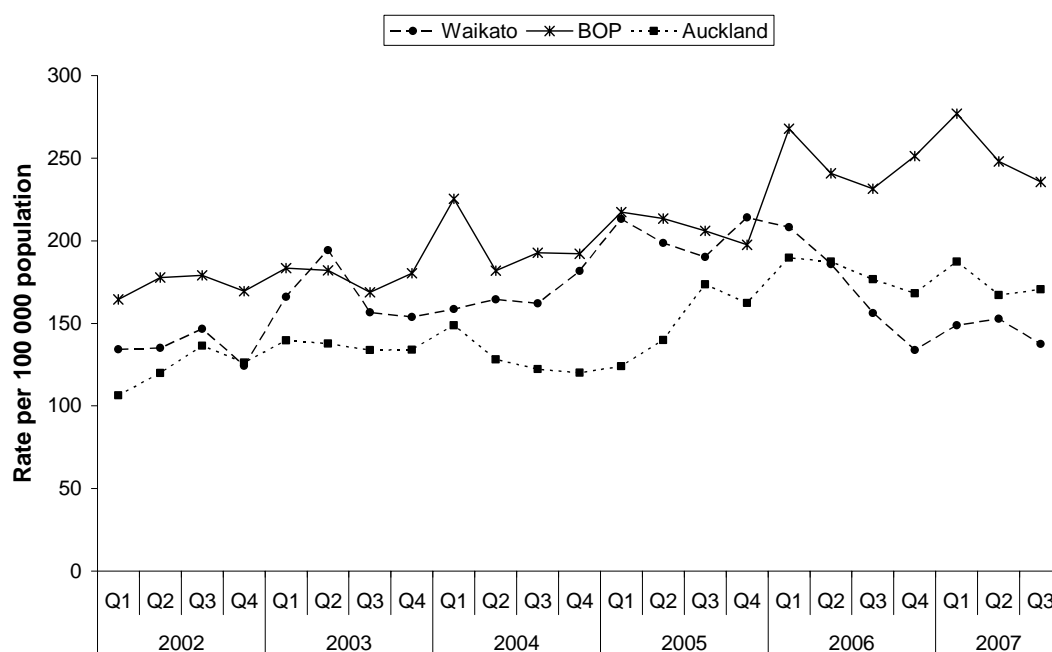
In the third quarter of 2007, a total of 3 408 cases of chlamydia were reported. This represents a rate of 174.6 per 100 000 population (Auckland: 170.6 per 100 000; Waikato: 137.4 per 100 000; BOP: 235.6 per 100 000).

Compared to the previous quarter, the number of chlamydia diagnoses increased by 2.2% in the Auckland region. However, the number of chlamydia diagnoses decreased by 10.0% in the Waikato region and 5.0% in the BOP region. Chlamydia rates by quarter since January 2002 are shown in Figure 1.

Chlamydia cases reported in this quarter decreased by 3.7% on the total of 3 539 in the equivalent quarter of 2006. The largest decrease (12.1%) was seen in the Waikato region (530 in Quarter 3 2006, compared to 466 in Quarter 3 2007).

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

Figure 1. Rate of chlamydia reported through laboratory surveillance in the Auckland, Waikato and BOP regions: January 2002 to September 2007



Gonorrhoea Results – July to September, 2007

Gonorrhoea Incidence

Auckland Region (see table 2)

- Laboratories in the Auckland region tested 56 257 specimens for gonorrhoea, of which 662 (1.2%) specimens tested positive from 303 patients.
- Sixty-one 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 11 518 specimens for gonorrhoea, of which 95 (0.8%) specimens tested positive from 81 patients.
- Sixty-four 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 9 561 specimens for gonorrhoea, of which 75 (0.8%) specimens tested positive from 60 patients.
- Sixty-five percent of all positive patients were aged 15 to 24 years.
- The highest rates of gonorrhoea in both females and males were in the 20 to 24 years age group.

New laboratories (see table 2)

- New laboratories reported 184 (0.8%) test-positive specimens for gonorrhoea from 160 patients.
- Seventy-two percent of all positive patients were aged 15 to 24 years.
- The highest number of gonorrhoea 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: Gonorrhoea Incidence, July to September, 2007

Table 2. Number of test-positive cases and rates of gonorrhoea, age group and sex:
July to September 2007

Region	Age group (Yrs)	Number of test-positive cases				Rate per 100 000		
		Female	Male	Unknown	Total	Female	Male	Total
Auckland	<1	0	3	0	3	0.0	44.8	22.9
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	3	1	0	4	9.6	3.0	6.2
	15-19	46	39	0	85	144.1	120.5	132.2
	20-24	39	59	1	99	111.7	177.9	145.4
	25-29	14	28	0	42	43.2	94.7	67.7
	30-34	5	18	0	23	14.5	58.5	35.3
	>34	5	41	1	47	2.5	22.1	12.1
	Unknown	0	0	0	0			
	Total	112	189	2	303	26.1	46.3	36.2
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	2	0	0	2	15.1	0.0	7.3
	15-19	19	10	0	29	147.2	76.0	111.3
	20-24	7	16	0	23	62.2	137.7	100.6
	25-29	3	11	0	14	30.0	113.9	71.2
	30-34	3	5	0	8	26.5	49.0	37.2
	>34	0	5	0	5	0.0	6.1	2.9
	Unknown	0	0	0	0			
	Total	34	47	0	81	19.6	28.3	23.9
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	3	0	0	3	25.4	0.0	12.5
	15-19	12	10	0	22	120.1	95.0	107.2
	20-24	10	7	0	17	137.3	96.2	116.8
	25-29	6	5	0	11	77.1	69.7	73.5
	30-34	0	3	0	3	0.0	35.6	16.6
	>34	1	3	0	4	1.2	4.0	2.5
	Unknown	0	0	0	0			
	Total	32	28	0	60	21.3	19.6	20.5
New Laboratories	<1	1	1	0	2			
	1-9	0	0	0	0			
	10-14	2	0	0	2			
	15-19	32	30	0	62			
	20-24	21	32	0	53			
	25-29	4	18	1	23			
	30-34	1	6	0	7			
	>34	4	7	0	11			
	Unknown	0	0	0	0			
	Total	65	94	1	160			

Gonorrhoea trends: Auckland, Waikato and BOP Regions

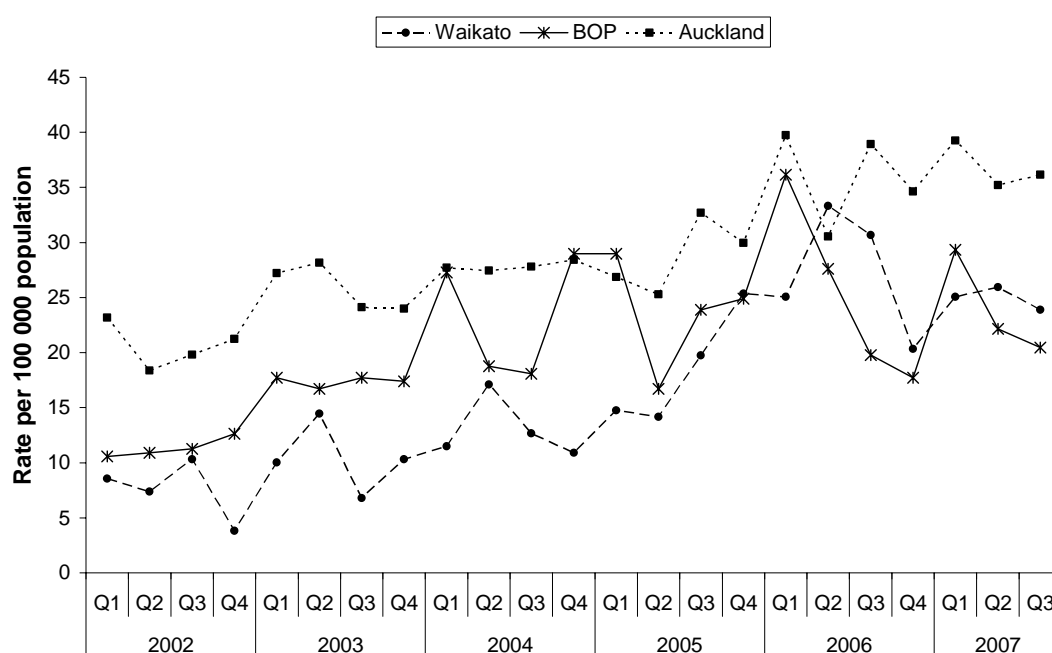
In the third quarter of 2007, a total of 444 cases of gonorrhoea were reported. This represents a rate of 30.2 per 100 000 population (Auckland: 36.2 per 100 000; Waikato: 23.9 per 100 000; BOP: 20.5 per 100 000).

Compared to the previous quarter, the number of gonorrhoea diagnoses increased by 2.7% in the Auckland region. However, the number of gonorrhoea diagnoses decreased by 8.0% in the Waikato region and 7.7% in the BOP region. Gonorrhoea rates by quarter since January 2002 are shown in Figure 2.

Gonorrhoea cases reported in this quarter decreased by 9.0% on the total of 488 in the equivalent quarter of 2006. The largest decrease (22.1%) was seen in the Waikato region (104 in Quarter 3 2006, compared to 81 in Quarter 3 2007).

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 2002 to September 2007



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)
- Taumarunui 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
- Gisborne Hospital Laboratory, Tairāwhiti
- MedLab Gisborne, Tairāwhiti (Closed end August 2007)
- 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