

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

**July to September 2005**

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by

STI Surveillance Team  
Population and Environmental Health Group  
Institute of Environmental Science & Research Ltd.

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**This report is also available at [www.surv.esr.cri.nz](http://www.surv.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 last quarter (July to September) 2005 from forty laboratories across New Zealand.

Quarterly reports of clinic-based surveillance are provided separately and are available at [www.surv.esr.cri.nz](http://www.surv.esr.cri.nz).

*All results and analyses are based on data submitted prior to the 2<sup>nd</sup> November 2005. 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 two positive specimens 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 (DHB) 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*

Thirty-nine laboratories provide chlamydia data for STI surveillance. Of these, 38 laboratories submitted chlamydia data for the third quarter (July to September) 2005. 1/38 (2.6%) of laboratories were not able to provide data by the date required for all three months in this quarter.

Thirty-two laboratories provide gonorrhoea data for STI surveillance. All 32 laboratories submitted gonorrhoea data for the third quarter (July to September) 2005. 1/32 (3.1%) of laboratories were not able to provide data by the date required for all three months in this quarter.

Of all positive data submitted 1.8% were of unknown age and 0.3% were of unknown sex.

# Chlamydia Results – July to September, 2005

## Chlamydia Incidence

### *Auckland Region (see table 1)*

- Laboratories in the Auckland region tested 34 180 specimens for chlamydia, of which 2 380 (7.0%) specimens tested positive from 2 290 patients.
- Sixty two percent of all positive patients occurred in people aged 15 to 24 years.
- The highest rates of chlamydia in females and males were found in the 20 to 24 years age group.

### *Waikato region (see table 1)*

- Laboratories in the Waikato region tested 6 005 specimens for chlamydia, of which 649 (10.8%) specimens tested positive from 645 patients.
- Seventy three percent of all positive patients occurred in people aged 15 to 24 years.
- The highest rates of chlamydia in females and males were found in the 20 to 24 years age group.

### *Bay of Plenty Region (see table 1)*

- Laboratories in the BOP region tested 6 304 specimens for chlamydia, of which 579 (9.2%) specimens tested positive from 604 patients.
- Seventy three percent of all positive patients occurred in people aged 15 to 24 years.
- The highest rates of chlamydia were found in the 15 to 19 years age group in females and the 20 to 24 years age group in males.

### *New laboratories (see table 1)*

- New laboratories reported 1 329 (10.2%) test-positive specimens for chlamydia from 1 216 patients.
- Seventy percent of all positive patients occurred in people aged 15 to 24 years.
- The highest numbers of chlamydia were found in the 15 to 19 years age group in females and the 20 to 24 years age group in males.

# Data tables: Chlamydia Incidence, July to September, 2005

**Table 1.** Number of test-positive cases and rates of chlamydia, age group and sex:  
July to September 2005

Region	Age group (Yrs)	Number of test-positive cases				Rate per 100 000		
		Female	Male	Unknown	Total	Female	Male	Total
Auckland	<1	13	8	0	21	137.5	88.5	113.5
	1-9	0	2	0	2	0.0	2.5	1.2
	10-14	20	1	0	21	43.7	2.3	23.5
	15-19	500	84	1	585	1171.2	200.9	692.2
	20-24	606	219	0	825	1490.7	520.2	997.0
	25-29	256	108	0	364	628.5	239.2	423.8
	30-34	136	75	0	211	297.3	146.5	217.7
	>34	135	124	0	259	51.5	42.6	46.8
	Unknown	1	0	1	2			
	<b>Total</b>	1667	621	2	2290	292.3	103.0	195.2
Waikato	<1	1	2	0	3	40.8	84.4	62.2
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	6	1	0	7	44.7	7.6	26.3
	15-19	187	52	1	240	1518.1	447.4	1002.5
	20-24	156	74	0	230	1518.2	729.8	1126.6
	25-29	48	38	0	86	493.2	368.9	429.3
	30-34	24	16	0	40	226.6	135.1	178.3
	>34	14	19	0	33	19.0	23.7	21.4
	Unknown	0	0	6	6			
	<b>Total</b>	436	202	7	645	279.3	125.0	203.0
Bay of Plenty	<1	3	0	0	3	142.5	0.0	73.1
	1-9	1	0	0	1	4.9	0.0	2.5
	10-14	16	2	0	18	137.3	17.6	78.1
	15-19	255	35	0	290	2713.1	393.1	1584.4
	20-24	103	50	0	153	1496.7	710.1	1098.9
	25-29	53	16	0	69	708.1	189.7	433.4
	30-34	30	9	0	39	344.9	89.8	208.3
	>34	16	11	0	27	24.0	15.0	19.2
	Unknown	1	1	2	4			
	<b>Total</b>	478	124	2	604	358.2	88.1	220.3
New Laboratories	<1	4	4	0	8			
	1-9	0	2	0	2			
	10-14	15	1	0	16			
	15-19	360	86	3	449			
	20-24	295	112	0	407			
	25-29	84	48	1	133			
	30-34	43	21	0	64			
	>34	33	25	0	58			
	Unknown	38	41	0	79			
	<b>Total</b>	872	340	4	1216			

### Chlamydia trends: Auckland, Waikato and BOP Regions

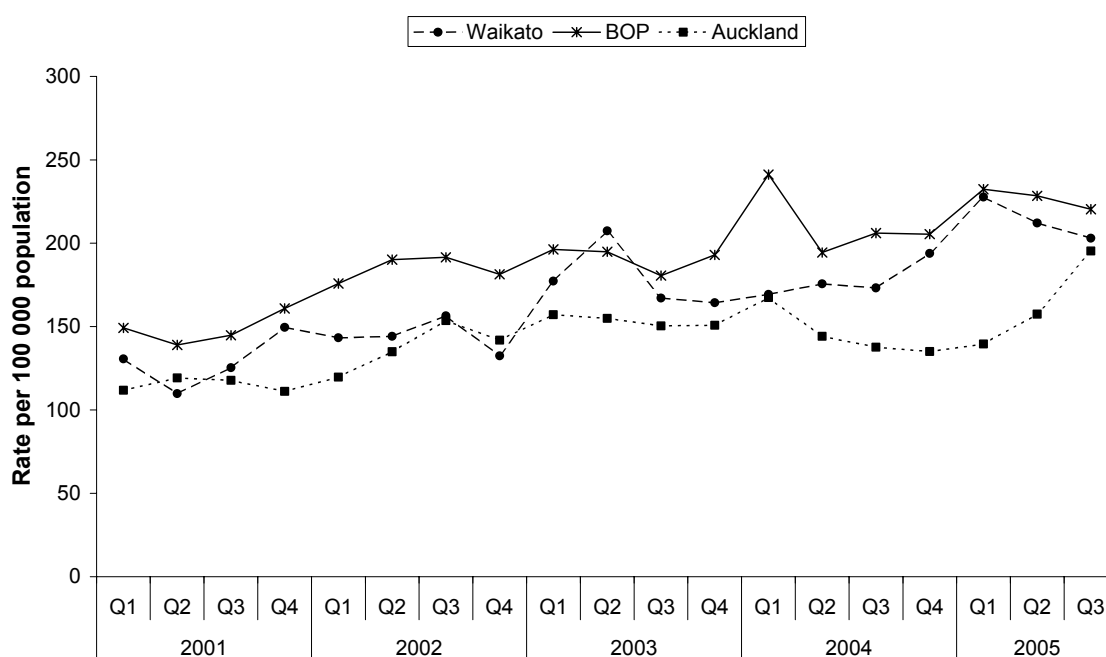
In the third quarter of 2005, a total of 3 539 cases of chlamydia were reported. This represents a rate of 200.5 per 100 000 population (Auckland: 195.2 per 100 000; Waikato: 203.0 per 100 000; BOP: 220.3 per 100 000).

Compared to the previous quarter, the number of chlamydia diagnoses increased by 24.0% in the Auckland region and the number of chlamydia diagnoses decreased by 4.3% in the Waikato region and 3.5% in the BOP region.

Chlamydia cases reported in this quarter increased by 29.7% on the total of 2 729 in the equivalent quarter of 2004. The largest increase (41.9%) was seen in the Auckland region (1614 in Quarter 3 2004, compared to 2 290 in Quarter 3 2005).

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

**Figure 1.** Rate of chlamydia reported through laboratory surveillance in the Auckland, Waikato and BOP regions: January 2001 to September 2005





## **Gonorrhoea Results – July to September, 2005**

### **Gonorrhoea Incidence**

#### ***Auckland Region (see table 2)***

- Laboratories in the Auckland region tested 52 499 specimens for gonorrhoea, of which 414 (0.8%) specimens tested positive from 274 patients.
- Fifty four percent of all positive patients occurred in people aged 15 to 24 years.
- The highest rates of gonorrhoea were found in the 15 to 19 years age group in females and the 20 to 24 years age group in males.

#### ***Waikato region (see table 2)***

- Laboratories in the Waikato region tested 9 700 specimens for gonorrhoea, of which 70 (0.7%) specimens tested positive from 67 patients.
- Seventy six percent of all positive patients occurred in people aged 15 to 24 years.
- The highest rates of gonorrhoea in females and males were found in the 20 to 24 years age group.

#### ***Bay of Plenty Region (see table 2)***

- Laboratories in the BOP region tested 9 573 specimens for gonorrhoea, of which 70 (0.7%) specimens tested positive from 70 patients.
- Seventy six percent of all positive patients occurred in people aged 15 to 24 years.
- The highest rates of gonorrhoea were found in the 20 to 24 years age group in females and the 15 to 19 years age group in males.

#### ***New laboratories (see table 2)***

- New laboratories reported 127 (0.5%) test-positive specimens for gonorrhoea from 95 patients.
- Seventy three percent of all positive patients occurred in people aged 15 to 24 years.
- The highest numbers of gonorrhoea in females and males were found in the 15 to 19 years age group.

# Data tables: Gonorrhoea Incidence, July to September, 2005

**Table 2.** Number of test-positive cases and rates of gonorrhoea, age group and sex:  
July to September 2005

Region	Age group (Yrs)	Number of test-positive cases				Rate per 100 000		
		Female	Male	Unknown	Total	Female	Male	Total
Auckland	<1	2	3	0	5	31.7	50.1	40.7
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	3	0	0	3	10.4	0.0	5.3
	15-19	35	26	0	61	129.1	97.3	113.3
	20-24	28	57	1	86	103.0	196.7	153.2
	25-29	15	30	0	45	54.9	98.9	78.0
	30-34	12	17	0	29	40.5	51.4	46.2
	>34	8	36	0	44	5.0	20.1	12.9
	Unknown	0	1	0	1			
	<b>Total</b>	103	170	1	274	28.5	44.5	36.9
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	1	0	1	0.0	7.6	3.8
	15-19	10	8	0	18	81.2	68.8	75.2
	20-24	11	22	0	33	107.1	217.0	161.6
	25-29	0	7	0	7	0.0	67.9	34.9
	30-34	1	1	0	2	9.4	8.4	8.9
	>34	3	3	0	6	4.1	3.7	3.9
	Unknown	0	0	0	0			
	<b>Total</b>	25	42	0	67	16.0	26.0	21.1
Bay of Plenty	<1	0	0	0	0	0.0	0.0	0.0
	1-9	1	0	0	1	4.9	0.0	2.5
	10-14	2	0	0	2	17.2	0.0	8.7
	15-19	19	12	0	31	202.1	134.8	169.4
	20-24	14	8	0	22	203.4	113.6	158.0
	25-29	4	1	0	5	53.4	11.9	31.4
	30-34	3	1	0	4	34.5	10.0	21.4
	>34	0	4	0	4	0.0	5.4	2.9
	Unknown	0	1	0	1			
	<b>Total</b>	43	27	0	70	32.2	19.2	25.5
New Laboratories	<1	0	0	0	0			
	1-9	0	0	0	0			
	10-14	0	0	0	0			
	15-19	21	19	0	40			
	20-24	12	17	0	29			
	25-29	0	7	0	7			
	30-34	1	2	0	3			
	>34	1	12	0	13			
	Unknown	0	2	1	3			
	<b>Total</b>	35	59	1	95			

## Gonorrhoea trends: Auckland, Waikato and BOP Regions

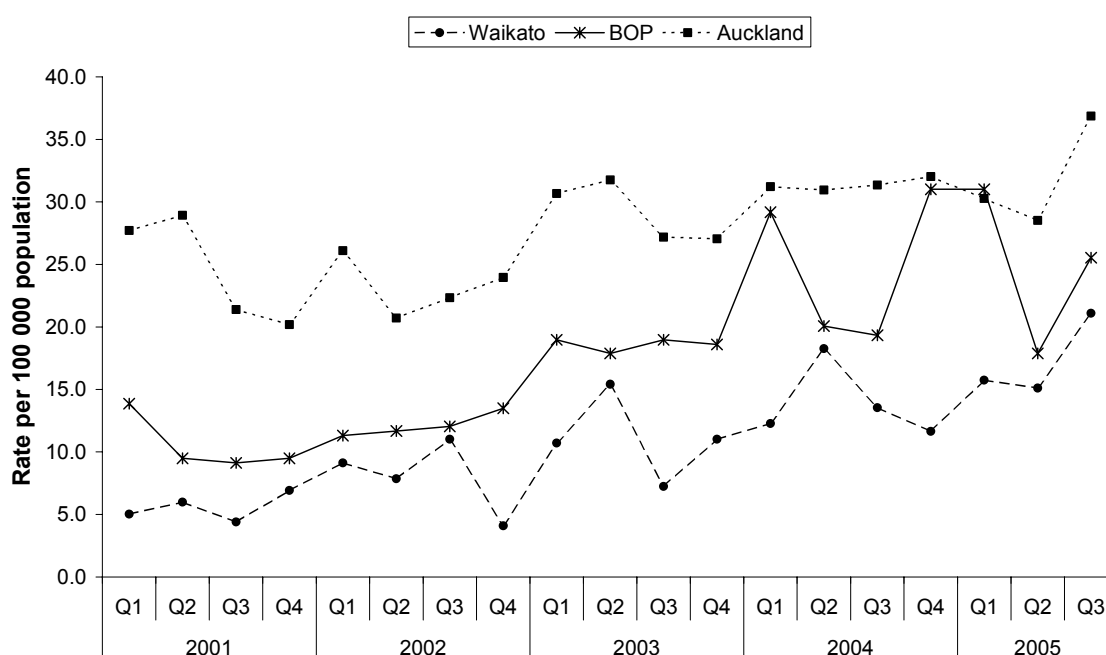
In the third quarter of 2005, a total of 411 cases of gonorrhoea were reported. This represents a rate of 30.8 per 100 000 population (Auckland: 36.9 per 100 000; Waikato: 21.1 per 100 000; BOP: 25.5 per 100 000).

Compared to the previous quarter, the number of gonorrhoea diagnoses increased by 29.2% in the Auckland region, 39.6% in the Waikato region and 42.9% in the BOP region.

Gonorrhoea cases reported in this quarter increased by 24.9% on the total of 329 in the equivalent quarter of 2004. The largest increase (55.8%) was seen in the Waikato region (43 in Quarter 3 2004, compared to 67 in Quarter 3 2005).

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

**Figure 2.** Rate of gonorrhoea reported through laboratory surveillance in the Auckland, Waikato and BOP regions: January 2001 to September 2005



## Appendix A

STI surveillance data is received from the following laboratories:

- Northland Pathology Laboratory, Northland
- Dargaville Hospital Laboratory, Northland
- Kaitia Hospital Laboratory, Northland
- Bay of Islands Hospital Laboratory, Northland
- Whangarei Hospital Laboratory, Northland
- North Shore Hospital Laboratory, Waitemata
- Diagnostic MedLab Auckland, Auckland
- LabPlus, Auckland
- Auckland Southern Community Laboratory, 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
- Tokoraoa 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
- Taranaki MedLab, Taranaki
- Hutt Hospital Laboratory, Hutt Valley
- Medical Laboratory Wellington, Capital and Coast
- 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
- Clyde Southern Community Laboratory, Otago
- Alexandra Southern Community Laboratory, Otago
- Balclutha Southern Community Laboratory, Otago
- Queenstown Southern Community Laboratory, Southland
- HealthLab Kew (Southland Hospital), Southland
- Invercargill Southern Community Laboratory, Southland
- Gore Southern Community Laboratory, Southland