

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

**October to December 2005**

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by

STI Surveillance Team  
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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 (October to December) 2005 from thirty-nine 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 7<sup>th</sup> February 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 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***

#### **Chlamydia data**

Thirty-eight laboratories provide chlamydia data for STI surveillance. Of these, thirty-seven laboratories submitted chlamydia data by the date required for all three months of the fourth quarter (October to December) 2005.

#### **Gonorrhoea data**

Thirty-one laboratories provide gonorrhoea data for STI surveillance. All thirty-one laboratories submitted gonorrhoea data by the date required for all three months of the fourth quarter (October to December) 2005.

Of all test-positive data submitted 1.4% were of unknown age and 0.1% were of unknown sex.

# Chlamydia Results – October to December, 2005

## Chlamydia Incidence

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

- Laboratories in the Auckland region tested 31 557 specimens for chlamydia, of which 2 242 (7.1%) specimens tested positive from 2 142 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 5 993 specimens for chlamydia, of which 730 (12.2%) specimens tested positive from 726 patients.
- Seventy 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 5 795 specimens for chlamydia, of which 579 (10.0%) specimens tested positive from 579 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 1 337 (9.8%) test-positive specimens for chlamydia from 1 254 patients.
- Sixty nine 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, October to December, 2005

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

Region	Age group (Yrs)	Number of test-positive cases				Rate per 100 000		
		Female	Male	Unknown	Total	Female	Male	Total
Auckland	<1	13	7	0	20	137.5	77.4	108.1
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	27	3	0	30	59.0	6.9	33.5
	15-19	497	106	0	603	1164.2	253.5	713.5
	20-24	585	178	0	763	1439.0	422.8	922.1
	25-29	232	123	0	355	569.5	272.4	413.3
	30-34	103	67	0	170	225.2	130.9	175.4
	>34	116	84	1	201	44.2	28.9	36.3
	Unknown	0	0	0	0			
	<b>Total</b>	1573	568	1	2142	275.9	94.2	182.6
Waikato	<1	4	2	0	6	163.2	84.4	124.5
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	15	2	0	17	111.8	15.2	64.0
	15-19	213	58	0	271	1729.2	499.1	1132.0
	20-24	160	80	0	240	1557.2	789.0	1175.6
	25-29	60	43	1	104	616.5	417.4	519.1
	30-34	23	14	0	37	217.2	118.2	164.9
	>34	29	21	0	50	39.3	26.2	32.5
	Unknown	0	0	1	1			
	<b>Total</b>	504	220	2	726	322.9	136.1	228.5
Bay of Plenty	<1	3	3	0	6	142.5	150.2	146.2
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	17	3	0	20	145.9	26.4	86.8
	15-19	231	30	0	261	2457.7	336.9	1426.0
	20-24	129	45	1	175	1874.5	639.1	1256.9
	25-29	45	22	0	67	601.2	260.8	420.8
	30-34	18	5	0	23	207.0	49.9	122.9
	>34	20	7	0	27	30.0	9.5	19.2
	Unknown	0	0	0	0			
	<b>Total</b>	463	115	1	579	347.0	81.7	211.2
New Laboratories	<1	4	5	0	9			
	1-9	0	1	0	1			
	10-14	29	4	0	33			
	15-19	385	72	1	458			
	20-24	290	111	0	401			
	25-29	95	59	0	154			
	30-34	50	15	0	65			
	>34	32	33	0	65			
	Unknown	32	35	1	68			
	<b>Total</b>	917	335	2	1254			

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

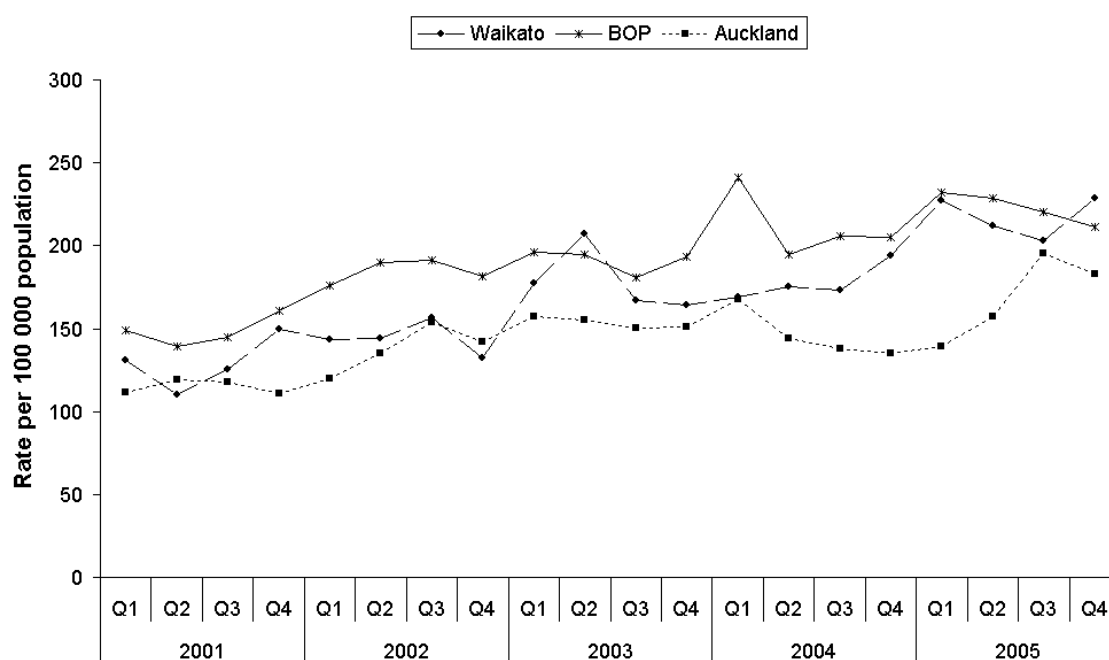
In the fourth quarter of 2005, a total of 3 447 cases of chlamydia were reported. This represents a rate of 195.3 per 100 000 population (Auckland: 182.6 per 100 000; Waikato: 228.5 per 100 000; BOP: 211.2 per 100 000).

Compared to the previous quarter, the number of chlamydia diagnoses decreased by 6.5% in the Auckland region and 4.1% in the BOP region. However, the number of chlamydia diagnoses increased by 12.6% in the Waikato region. Chlamydia rates by quarter since January 2001 are shown in Figure 1.

Chlamydia cases reported in this quarter increased by 24.8 % on the total of 2 672 in the equivalent quarter of 2004. The largest increase (35.3 %) was seen in the Auckland region (1 583 in Quarter 4 2004, compared to 2 142 in Quarter 4 2005).

The rate of chlamydia in the Auckland region was significantly lower than the Waikato and BOP regions. There was no significant difference in the rate of chlamydia in the 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 December 2005





# **Gonorrhoea Results – October to December, 2005**

## **Gonorrhoea Incidence**

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

- Laboratories in the Auckland region tested 51 039 specimens for gonorrhoea, of which 508 (1.0%) specimens tested positive from 251 patients.
- Fifty 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 9 712 specimens for gonorrhoea, of which 93 (1.0%) specimens tested positive from 86 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 found in the 20 to 24 years age group.

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

- Laboratories in the BOP region tested 8 873 specimens for gonorrhoea, of which 75 (0.8%) specimens tested positive from 73 patients.
- Sixty six 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 97 (0.3%) test-positive specimens for gonorrhoea from 77 patients.
- Sixty four 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, October to December, 2005

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

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	5	0	0	5	9.4	0.0	4.8
	10-14	2	0	0	2	6.9	0.0	3.6
	15-19	33	28	0	61	121.7	104.8	113.3
	20-24	25	43	0	68	92.0	148.4	121.1
	25-29	6	29	1	36	22.0	95.6	62.4
	30-34	5	22	0	27	16.9	66.5	43.0
	>34	13	39	0	52	8.0	21.8	15.3
	Unknown	0	0	0	0			
	<b>Total</b>	89	161	1	251	24.6	42.2	33.8
Waikato	<1	0	0	0	0	0.0	0.0	0.0
	1-9	1	0	0	1	4.2	0.0	2.2
	10-14	0	0	0	0	0.0	0.0	0.0
	15-19	12	14	0	26	97.4	120.5	108.6
	20-24	11	16	0	27	107.1	157.8	132.3
	25-29	6	10	0	16	61.7	97.1	79.9
	30-34	0	0	0	0	0.0	0.0	0.0
	>34	5	10	0	15	6.8	12.5	9.7
	Unknown	0	0	1	1			
	<b>Total</b>	35	50	1	86	22.4	30.9	27.1
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	25	4	0	29	266.0	44.9	158.4
	20-24	9	10	0	19	130.8	142.0	136.5
	25-29	5	5	0	10	66.8	59.3	62.8
	30-34	5	2	0	7	57.5	20.0	37.4
	>34	1	5	0	6	1.5	6.8	4.3
	Unknown	0	2	0	2			
	<b>Total</b>	45	28	0	73	33.7	19.9	26.6
New Laboratories	<1	0	0	0	0			
	1-9	0	0	0	0			
	10-14	2	1	0	3			
	15-19	20	7	0	27			
	20-24	9	13	0	22			
	25-29	3	6	0	9			
	30-34	2	3	0	5			
	>34	1	10	0	11			
	Unknown	0	0	0	0			
	<b>Total</b>	37	40	0	77			

## Gonorrhoea trends: Auckland, Waikato and BOP Regions

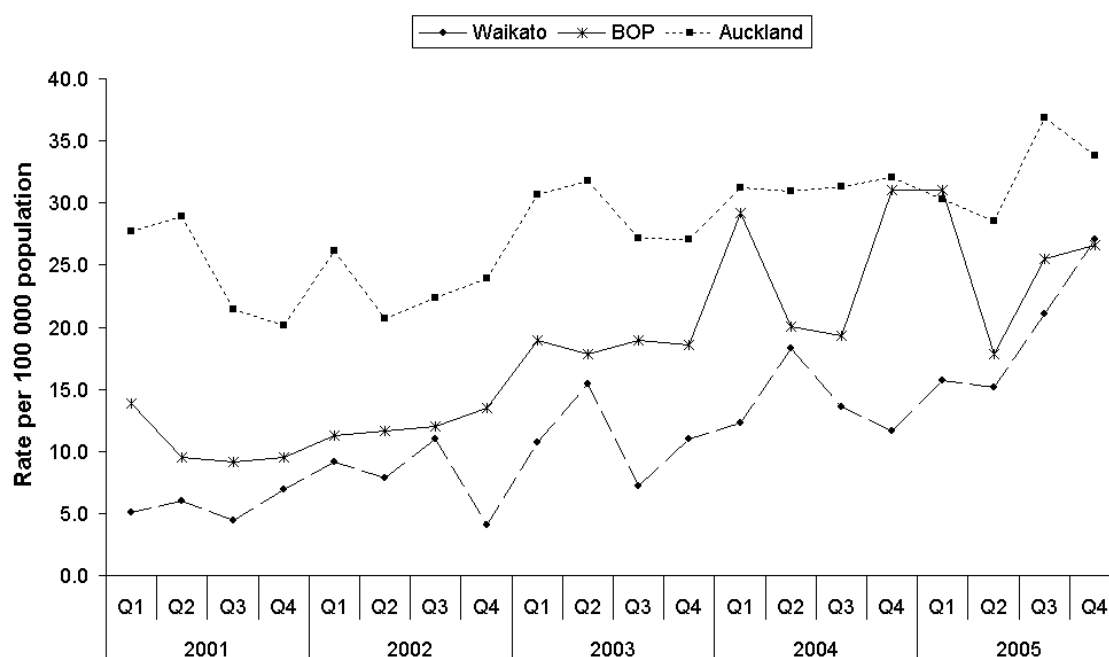
In the fourth quarter of 2005, a total of 410 cases of gonorrhoea were reported. This represents a rate of 30.7 per 100 000 population (Auckland: 33.8 per 100 000; Waikato: 27.1 per 100 000; BOP: 26.6 per 100 000).

Compared to the previous quarter, the number of gonorrhoea diagnoses decreased by 8.4 % in the Auckland region and the number of gonorrhoea diagnoses increased by 28.4% in the Waikato region and 4.3 % in the BOP region. Gonorrhoea rates by quarter since January 2001 are shown in Figure 2.

Gonorrhoea cases reported in this quarter increased by 13.9% on the total of 360 in the equivalent quarter of 2004. The largest increase (132.4%) was seen in the Waikato region (37 in Quarter 4 2004, compared to 86 in Quarter 4 2005).

There were no significant differences in the rates of gonorrhoea among these three regions.

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