

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

**July to September 2006**

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by

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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) 2006 from forty-one 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 1<sup>st</sup> November 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 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 third quarter (July to September) 2006.

#### **Gonorrhoea data**

Thirty-three laboratories provide gonorrhoea data for STI surveillance. All thirty-three laboratories submitted gonorrhoea data by the date required for all three months of the third quarter (July to September) 2006.

Of all test-positive data submitted 1.8% were of unknown age and 0.6% were of unknown sex.

# Chlamydia Results – July to September, 2006

## Chlamydia Incidence

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

- Laboratories in the Auckland region tested 34 745 specimens for chlamydia, of which 2 471 (7.1%) specimens tested positive from 2 330 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 6 617 specimens for chlamydia, of which 530 (8.0%) specimens tested positive from 530 patients.
- Seventy-two 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 6 330 specimens for chlamydia, of which 679 (10.7 %) specimens tested positive from 679 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 2 012 (10.5 %) test-positive specimens for chlamydia from 1 891 patients.
- Seventy-two 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, July to September, 2006**

**Table 1.** Number of test-positive cases and rates of chlamydia, age group and sex:  
July to September 2006

Region	Age group (Yrs)	Number of test-positive cases				Rate per 100 000		
		Female	Male	Unknown	Total	Female	Male	Total
<b>Auckland</b>	<1	4	11	1	16	42.3	121.7	86.5
	1-9	4	0	0	4	4.8	0.0	2.5
	10-14	10	2	0	12	21.9	4.6	13.4
	15-19	621	132	2	755	1454.7	315.6	893.4
	20-24	596	170	0	766	1466.1	403.8	925.7
	25-29	281	123	1	405	689.8	272.4	471.5
	30-34	121	58	1	180	264.6	113.3	185.7
	>34	107	82	1	190	40.8	28.2	34.3
	Unknown	1	1	0	2			
<b>Total</b>		1745	579	6	2330	306.0	96.0	198.6
<b>Waikato</b>	<1	8	3	0	11	326.4	126.6	228.2
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	5	0	0	5	37.3	0.0	18.8
	15-19	165	42	0	207	1339.5	361.4	864.7
	20-24	130	43	0	173	1265.2	424.1	847.4
	25-29	46	34	0	80	472.7	330.0	399.3
	30-34	26	5	0	31	245.5	42.2	138.2
	>34	11	8	0	19	14.9	10.0	12.3
	Unknown	0	0	4	4			
<b>Total</b>		391	135	4	530	250.5	83.5	166.8
<b>Bay of Plenty</b>	<1	2	2	0	4	95.0	100.1	97.5
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	15	3	0	18	128.7	26.4	78.1
	15-19	293	48	0	341	3117.4	539.1	1863.1
	20-24	139	51	0	190	2019.8	724.3	1364.6
	25-29	54	17	0	71	721.4	201.5	446.0
	30-34	20	8	0	28	230.0	79.8	149.6
	>34	22	5	0	27	33.0	6.8	19.2
	Unknown	0	0	0	0			
<b>Total</b>		545	134	0	679	408.4	95.2	247.7
<b>New Laboratories</b>	<1	2	1	0	3			
	1-9	0	0	0	0			
	10-14	35	6	0	41			
	15-19	639	132	2	773			
	20-24	400	175	7	582			
	25-29	130	81	3	214			
	30-34	55	36	0	91			
	>34	51	43	1	95			
	Unknown	39	40	13	92			
<b>Total</b>		1351	514	26	1891			

## Chlamydia trends: Auckland, Waikato and BOP Regions

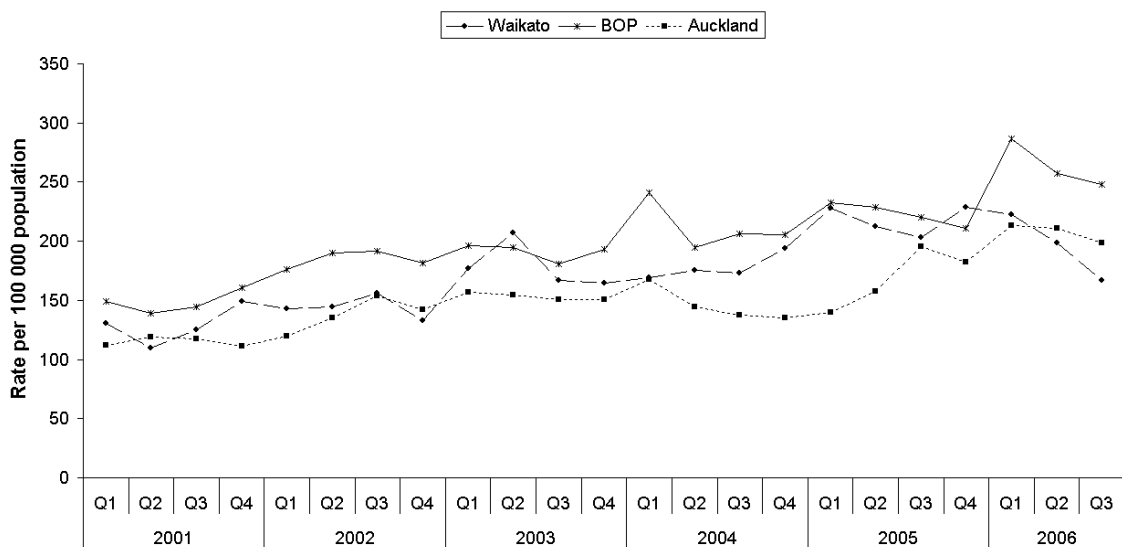
In the third quarter of 2006, a total of 3 539 cases of chlamydia were reported. This represents a rate of 200.5 per 100 000 population (Auckland: 198.6 per 100 000; Waikato: 166.8 per 100 000; BOP: 247.7 per 100 000).

Compared to the previous quarter, the number of chlamydia diagnoses decreased by 5.7 % in the Auckland region, 15.9 % in the Waikato region and 3.8 % in the BOP region. Chlamydia rates by quarter since January 2001 are shown in Figure 1.

Chlamydia cases reported in this quarter remained the same as the total of 3 539 in the equivalent quarter of 2005. The largest increase (12.4 %) was seen in the BOP region (604 in Quarter 3 2005, compared to 679 in Quarter 3 2006).

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 2001 to September 2006





## **Gonorrhoea Results – July to September, 2006**

### **Gonorrhoea Incidence**

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

- Laboratories in the Auckland region tested 54 351 specimens for gonorrhoea, of which 654 (1.2 %) specimens tested positive from 326 patients.
- Fifty-six 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 10 800 specimens for gonorrhoea, of which 110 (1.0 %) specimens tested positive from 104 patients.
- Fifty-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 9 837 specimens for gonorrhoea, of which 63 (0.6 %) specimens tested positive from 58 patients.
- Sixty-two 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 266 (0.6 %) test-positive specimens for gonorrhoea from 222 patients.
- Fifty-eight percent of all positive patients were aged 15 to 24 years.
- The highest number of gonorrhoea in both females and males were found in the 15 to 19 years age group.

**Data tables: Gonorrhoea Incidence, July to September, 2006**

**Table 2.** Number of test-positive cases and rates of gonorrhoea, age group and sex: July to September 2006

Region	Age group (Yrs)	Number of test-positive cases				Rate per 100 000		
		Female	Male	Unknown	Total	Female	Male	Total
<b>Auckland</b>	<1	1	1	0	2	15.9	16.7	16.3
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	0	2	0	2	0.0	7.3	3.6
	15-19	56	55	0	111	206.6	205.9	206.2
	20-24	25	47	0	72	92.0	162.2	128.2
	25-29	19	38	0	57	69.6	125.2	98.8
	30-34	4	21	0	25	13.5	63.5	39.8
	>34	16	41	0	57	9.9	22.9	16.7
	Unknown	0	0	0	0			
	<b>Total</b>		121	205	0	326	33.5	53.7
<b>Waikato</b>	<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	20	7	0	27	162.4	60.2	112.8
	20-24	16	13	0	29	155.7	128.2	142.1
	25-29	9	11	0	20	92.5	106.8	99.8
	30-34	8	5	0	13	75.5	42.2	57.9
	>34	5	9	0	14	6.8	11.2	9.1
	Unknown	0	0	0	0			
	<b>Total</b>		58	46	0	104	37.2	28.5
<b>Bay of Plenty</b>	<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	17.2	0.0	8.7
	15-19	17	7	0	24	180.9	78.6	131.1
	20-24	3	9	0	12	43.6	127.8	86.2
	25-29	4	5	0	9	53.4	59.3	56.5
	30-34	2	1	0	3	23.0	10.0	16.0
	>34	1	7	0	8	1.5	9.5	5.7
	Unknown	0	0	0	0			
	<b>Total</b>		29	29	0	58	21.7	20.6
<b>New Laboratories</b>	<1	0	0	0	0			
	1-9	0	0	0	0			
	10-14	2	0	0	2			
	15-19	41	31	0	72			
	20-24	27	29	0	56			
	25-29	13	24	0	37			
	30-34	5	9	0	14			
	>34	7	23	0	30			
	Unknown	3	7	1	11			
	<b>Total</b>		98	123	1	222		

## Gonorrhoea trends: Auckland, Waikato and BOP Regions

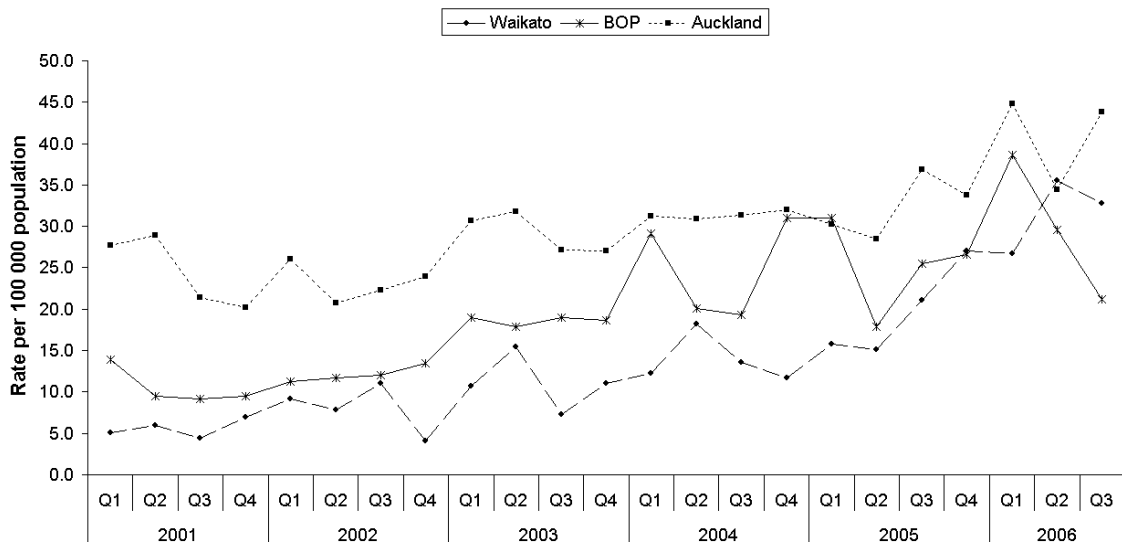
In the third quarter of 2006, a total of 488 cases of gonorrhoea were reported. This represents a rate of 36.5 per 100 000 population (Auckland: 43.9 per 100 000; Waikato: 32.7 per 100 000; BOP: 21.2 per 100 000).

Compared to the previous quarter, the number of gonorrhoea diagnoses increased by 27.3 % in the Auckland region. However, the number of gonorrhoea diagnoses decreased by 8.0 % in the Waikato region and 28.4 % in the BOP region. Gonorrhoea rates by quarter since January 2001 are shown in Figure 2.

Gonorrhoea cases reported in this quarter increased by 18.7 % on the total of 411 in the equivalent quarter of 2005. The largest increase (55.2%) was seen in the Waikato region (67 in Quarter 3 2005, compared to 104 in Quarter 3 2006).

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

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