

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

**April to June 2008**

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by

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**This report is available on the Internet at [www.surv.esr.cri.nz](http://www.surv.esr.cri.nz)  
Ad Hoc STI data requests may be emailed to [survqueries@esr.cri.nz](mailto:survqueries@esr.cri.nz)**

# Contents

<b>Introduction .....</b>	<b>1</b>
<b>Methods .....</b>	<b>2</b>
<b>Chlamydia Results – April to June, 2008 .....</b>	<b>3</b>
<u>Chlamydia Incidence</u> .....	3
<u>Data tables: Chlamydia Incidence, April to June, 2008</u> .....	4
<u>Chlamydia trends: Auckland, Waikato and BOP Regions</u> .....	5
<b>Gonorrhoea Results – April to June, 2008 .....</b>	<b>6</b>
<u>Gonorrhoea Incidence</u> .....	6
<u>Data tables: Gonorrhoea Incidence, April to June, 2008</u> .....	7
<u>Gonorrhoea trends: Auckland, Waikato and BOP Regions</u> .....	8
<b>Appendix A .....</b>	<b>9</b>

## 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 second quarter (April to June) 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](http://www.surv.esr.cri.nz).

*All results and analyses are based on data submitted prior to the 13<sup>th</sup> August 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.
<u>Waikato region</u>	Includes Waikato DHB.
<u>BOP region</u>	Includes BOP DHB and Lakes DHB.

### *Data completeness*

#### **Chlamydia data**

Thirty-seven laboratories provide chlamydia data for STI surveillance. All 37 laboratories submitted chlamydia data for the second quarter (April to June) 2008. 3/37 (8.1%) of laboratories were not able to provide complete chlamydia data by the date required for all three months in this quarter. Note: Invercargill Southern Community Laboratory closed in May therefore did not supply data for June. Pathlab Waikato and MedLab Bay of Plenty were unable to provide complete data for May and June, respectively.

#### **Gonorrhoea data**

Thirty-two laboratories provide gonorrhoea data for STI surveillance. All 32 laboratories submitted gonorrhoea data for the second quarter (April to June) 2008. 3/32 (9.4%) of laboratories were not able to provide complete gonorrhoea data by the date required for all three months in this quarter. See note under chlamydia data.

Of all test-positive data submitted 1.6% were of unknown age and 0.4% were of unknown sex.

# Chlamydia Results – April to June, 2008

## Chlamydia Incidence

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

- Laboratories in the Auckland region tested 38 453 specimens for chlamydia, of which 2 587 (6.7%) specimens tested positive from 2 484 patients.
- Sixty-seven 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 5 841 specimens for chlamydia, of which 631 (10.8%) specimens tested positive from 631 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 6 315 specimens for chlamydia, of which 732 (11.6%) specimens tested positive from 731 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.

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

- New laboratories reported 2 286 (11.1%) test-positive specimens for chlamydia from 2 179 patients.
- Seventy-three percent of all positive patients were aged 15 to 24 years.
- The highest number of chlamydia cases in the 15 to 19 years age group for females and 20 to 24 years age group for males.

# Data tables: Chlamydia Incidence, April to June, 2008

**Table 1.** Number of test-positive cases and rates of chlamydia, age group and sex:  
April to June 2008

Region	Age group (Yrs)	Number of test-positive cases				Rate per 100 000		
		Female	Male	Unknown	Total	Female	Male	Total
Auckland	<1	7	4	0	11	72.1	39.2	55.3
	1-9	0	2	0	2	0.0	2.3	1.2
	10-14	21	3	0	24	42.7	5.8	23.8
	15-19	648	141	3	792	1306.5	277.6	789.0
	20-24	665	207	3	875	1316.2	421.0	877.7
	25-29	265	108	0	373	561.6	249.3	412.2
	30-34	137	63	0	200	260.0	134.1	200.6
	>34	103	100	0	203	30.8	33.1	31.9
	Unknown	0	1	3	4	-	-	-
	<b>Total</b>	1846	629	9	2484	272.8	97.9	188.3
Waikato	<1	2	0	0	2	81.2	0.0	40.1
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	11	1	0	12	83.2	7.0	43.7
	15-19	225	55	0	280	1743.4	418.2	1074.4
	20-24	141	65	2	208	1253.7	559.6	909.8
	25-29	48	21	0	69	479.9	217.4	350.9
	30-34	15	10	0	25	132.6	98.0	116.2
	>34	18	17	0	35	20.0	20.8	20.4
	Unknown	0	0	0	0	-	-	-
	<b>Total</b>	460	169	2	631	265.8	101.7	186.0
Bay of Plenty	<1	2	1	0	3	97.6	46.0	71.0
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	31	2	0	33	262.9	16.3	137.1
	15-19	278	51	0	329	2782.8	484.3	1603.3
	20-24	159	50	0	209	2183.8	687.3	1435.8
	25-29	71	18	0	89	912.4	250.8	594.9
	30-34	26	11	0	37	270.1	130.5	204.9
	>34	21	6	0	27	25.3	8.0	17.1
	Unknown	0	0	4	4	-	-	-
	<b>Total</b>	588	139	4	731	390.5	97.4	249.3
New Laboratories	<1	1	3	2	6			
	1-9	1	3	0	4			
	10-14	49	4	0	53			
	15-19	737	173	2	912			
	20-24	496	191	1	688			
	25-29	142	83	1	226			
	30-34	47	34	0	81			
	>34	61	46	1	108			
	Unknown	59	37	5	101			
	<b>Total</b>	1593	574	12	2179			

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

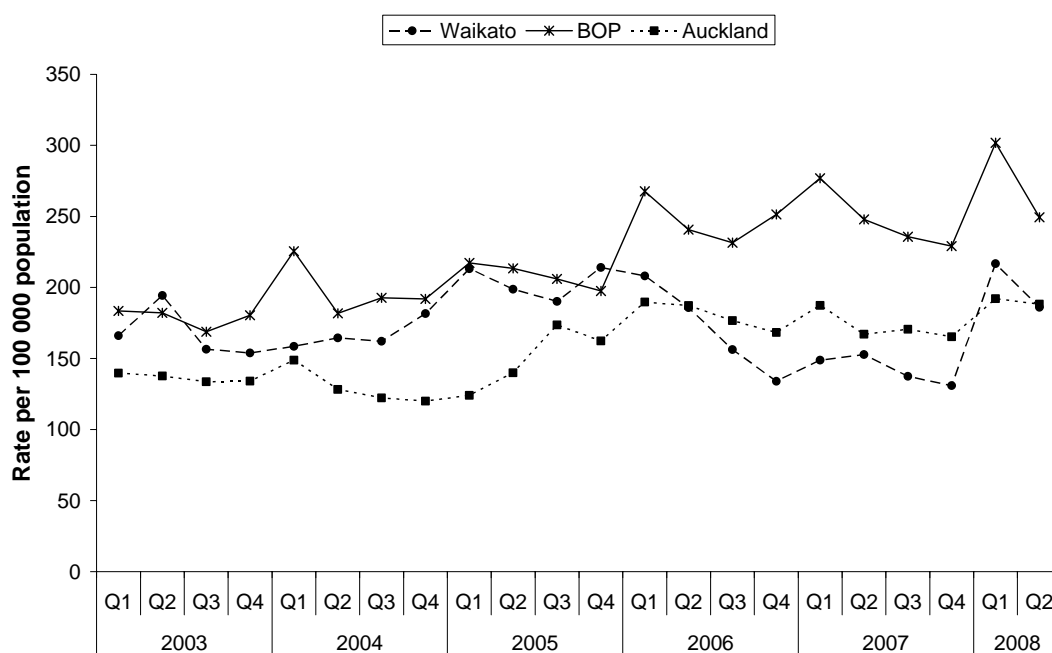
In the second quarter of 2008, a total of 3 846 cases of chlamydia were reported. This represents a rate of 197.1 per 100 000 population (Auckland: 188.3 per 100 000; Waikato: 186.0 per 100 000; BOP: 249.3 per 100 000).

Compared to the previous quarter, the number of chlamydia diagnoses decreased by 2.0% in the Auckland region, 14.1% in the Waikato region and 17.4% in the BOP region. Chlamydia rates by quarter since January 2003 are shown in Figure 1.

Chlamydia cases reported in this quarter increased by 11.5% on the total of 3 448 in the equivalent quarter of 2007. The largest increase (21.8%) was seen in the Waikato region (518 in Quarter 2 2007, compared to 631 in Quarter 2 2008).

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

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





## **Gonorrhoea Results – April to June, 2008**

### **Gonorrhoea Incidence**

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

- Laboratories in the Auckland region tested 60 869 specimens for gonorrhoea, of which 649 (1.1%) specimens tested positive from 302 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.

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

- Laboratories in the Waikato region tested 5 207 specimens for gonorrhoea, of which 64 (1.2%) specimens tested positive from 63 patients.
- Seventy-eight 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 4 482 specimens for gonorrhoea, of which 67 (1.5%) specimens tested positive from 65 patients.
- Seventy-seven percent of all positive patients were aged 15 to 24 years.
- The highest rate of gonorrhoea was found in the 20 to 24 years age group for females and the 15 to 19 years age group for males.

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

- New laboratories reported 341 (1.1%) test-positive specimens for gonorrhoea from 310 patients.
- Sixty-nine 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, April to June, 2008

**Table 2.** Number of test-positive cases and rates of gonorrhoea, age group and sex:  
April to June 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	1	1	0	2	3.2	3.0	3.1
	15-19	52	44	0	96	162.9	135.9	149.3
	20-24	43	59	0	102	123.2	177.9	149.9
	25-29	13	14	0	27	40.1	47.4	43.6
	30-34	13	18	0	31	37.8	58.5	47.5
	>34	9	35	0	44	4.4	18.8	11.3
	Unknown	0	0	0	0	-	-	-
	<b>Total</b>	131	171	0	302	30.5	41.9	36.1
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	7.0	3.6
	15-19	15	16	0	31	116.2	121.7	119.0
	20-24	8	10	0	18	71.1	86.1	78.7
	25-29	2	4	0	6	20.0	41.4	30.5
	30-34	1	2	0	3	8.8	19.6	13.9
	>34	3	1	0	4	3.3	1.2	2.3
	Unknown	0	0	0	0	-	-	-
	<b>Total</b>	29	34	0	63	16.8	20.5	18.6
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	2	0	2	0.0	16.3	8.3
	15-19	15	17	0	32	150.2	161.4	155.9
	20-24	11	7	0	18	151.1	96.2	123.7
	25-29	2	3	0	5	25.7	41.8	33.4
	30-34	1	3	0	4	10.4	35.6	22.2
	>34	0	4	0	4	0.0	5.4	2.5
	Unknown	0	0	0	0	-	-	-
	<b>Total</b>	29	36	0	65	19.3	25.2	22.2
New Laboratories	<1	2	0	0	2			
	1-9	0	0	0	0			
	10-14	3	1	0	4			
	15-19	65	43	0	108			
	20-24	37	68	1	106			
	25-29	17	23	0	40			
	30-34	10	11	0	21			
	>34	10	19	0	29			
	Unknown	0	0	0	0			
	<b>Total</b>	144	165	1	310			

## Gonorrhoea trends: Auckland, Waikato and BOP Regions

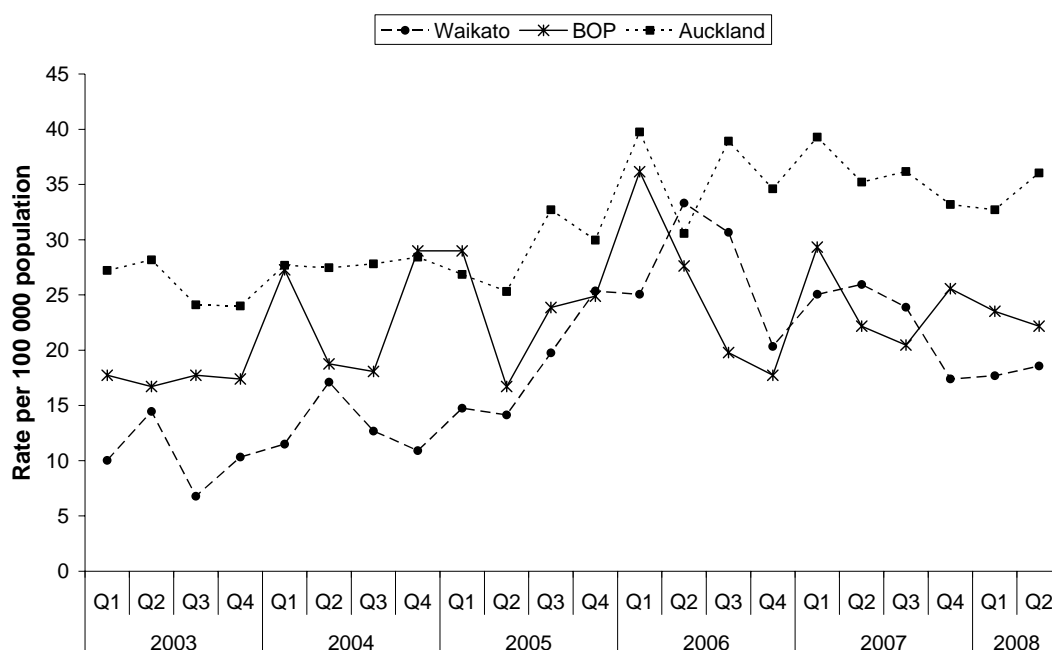
In the second quarter of 2008, a total of 430 cases of gonorrhoea were reported. This represents a rate of 29.2 per 100 000 population (Auckland: 36.1 per 100 000; Waikato: 18.6 per 100 000; BOP: 22.2 per 100 000).

Compared to the previous quarter, the number of gonorrhoea diagnoses increased by 10.2% in the Auckland region and 5.0% in the Waikato region. However, the number of gonorrhoea diagnoses decreased by 5.8% in the BOP region. Gonorrhoea rates by quarter since January 2003 are shown in Figure 2.

Gonorrhoea cases reported in this quarter decreased by 4.0% on the total of 448 in the equivalent quarter of 2007. The largest decrease (28.4%) was seen in the Waikato region (88 in Quarter 2 2007, compared to 63 in Quarter 2 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 June 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)
- Taumararui 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
- 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 (Gonorrhoea only)
- 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 (Closed end of May 2008)
- Gore Southern Community Laboratory, Southland