

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

**October to December 2008**

Prepared as part of a Ministry of Health  
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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 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)**

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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 fourth quarter (October to December) 2008 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 5<sup>th</sup> February 2009. 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.
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<u>Waikato region</u>	Includes Waikato DHB.
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<u>BOP region</u>	Includes BOP DHB and Lakes DHB.
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### *Data completeness*

#### **Chlamydia data**

Thirty-six laboratories provide chlamydia data for STI surveillance. All 36 laboratories submitted chlamydia data for the fourth quarter (October to December) 2008.

#### **Gonorrhoea data**

Thirty-one laboratories provide gonorrhoea data for STI surveillance. All 31 laboratories submitted gonorrhoea data for the fourth quarter (October to December) 2008.

Of all test-positive data submitted 1.1% were of unknown age and 0.2% were of unknown sex.

# Chlamydia Results – October to December, 2008

## Chlamydia Incidence

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

- Laboratories in the Auckland region tested 36 536 specimens for chlamydia, of which 2 560 (7.0%) specimens tested positive from 2 433 patients.
- Sixty-six percent of all positive patients were aged 15 to 24 years.
- The highest rates of chlamydia in both females and males were found in the 20 to 24 years age group.

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

- Laboratories in the Waikato region tested 6 885 specimens for chlamydia, of which 715 (10.4%) specimens tested positive from 715 patients.
- Seventy-six percent of all positive patients were aged 15 to 24 years.
- The highest rate of chlamydia 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 1)*

- Laboratories in the BOP region tested 7 161 specimens for chlamydia, of which 743 (10.4%) specimens tested positive from 742 patients.
- Seventy-five percent of all positive patients were aged 15 to 24 years.
- The highest rate of chlamydia 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 1)*

- New laboratories reported 2 343 (10.3%) test-positive specimens for chlamydia from 2 238 patients.
- Seventy-five percent of all positive patients were aged 15 to 24 years.
- The highest number of chlamydia cases was found in the 15 to 19 years age group for females and 20 to 24 years age group for males.

# Data tables: Chlamydia Incidence, October to December, 2008

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

Region	Age group (Yrs)	Number of test-positive cases				Rate per 100 000		
		Female	Male	Unknown	Total	Female	Male	Total
Auckland	<1	18	20	0	38	185.4	196.1	191.0
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	26	5	1	32	52.9	9.6	31.7
	15-19	607	146	1	754	1223.8	287.5	751.1
	20-24	656	186	0	842	1298.4	378.3	844.6
	25-29	257	123	0	380	544.6	284.0	419.9
	30-34	103	59	0	162	195.5	125.6	162.5
	35-39	48	39	0	87	85.6	77.5	81.7
	40+	76	62	0	138	27.4	24.6	26.0
	Unknown	0	0	0	0	-	-	-
	<b>Total</b>	1791	640	2	2433	264.7	99.6	184.4
Waikato	<1	8	3	0	11	324.8	118.8	220.5
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	7	2	0	9	52.9	14.1	32.8
	15-19	255	61	1	317	1975.8	463.8	1216.4
	20-24	153	73	1	227	1360.4	628.4	992.9
	25-29	57	27	0	84	569.9	279.5	427.2
	30-34	28	14	0	42	247.6	137.2	195.2
	35-39	6	8	0	14	47.3	70.6	58.3
	40+	4	7	0	11	5.2	9.9	7.4
	Unknown	0	0	0	0	-	-	-
	<b>Total</b>	518	195	2	715	299.3	117.4	210.8
Bay of Plenty	<1	2	2	0	4	97.6	92.1	94.7
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	23	0	0	23	195.0	0.0	95.6
	15-19	312	42	1	355	3123.1	398.9	1730.0
	20-24	157	44	0	201	2156.3	604.8	1380.9
	25-29	53	24	0	77	681.1	334.4	514.7
	30-34	21	15	0	36	218.1	177.9	199.4
	35-39	15	8	0	23	136.0	83.8	111.8
	40+	15	6	0	21	20.8	9.2	15.3
	Unknown	2	0	0	2	-	-	-
	<b>Total</b>	600	141	1	742	398.5	98.8	253.0
New Laboratories	<1	6	5	0	11			
	1-9	6	1	1	8			
	10-14	45	2	0	47			
	15-19	794	184	0	978			
	20-24	485	211	1	697			
	25-29	120	101	0	221			
	30-34	57	36	0	93			
	35-39	34	20	0	54			
	40+	25	33	1	59			
	Unknown	33	36	1	70			
	<b>Total</b>	1605	629	4	2238			

## Chlamydia trends: Auckland, Waikato and BOP Regions

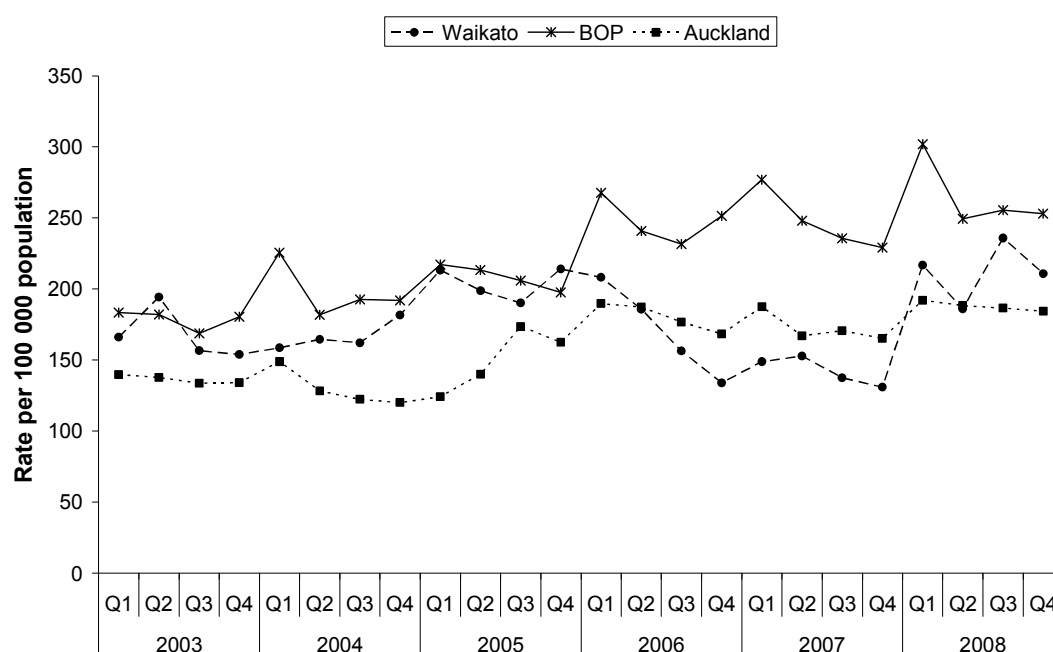
In the last quarter of 2008, a total of 3 890 cases of chlamydia were reported. This represents a rate of 199.3 per 100 000 population (Auckland: 184.4 per 100 000; Waikato: 210.8 per 100 000; BOP: 253.0 per 100 000).

Compared to the previous quarter, the number of chlamydia diagnoses decreased by 1.1% in the Auckland region, 10.6% in the Waikato region and 0.9% in the BOP region. Chlamydia rates by quarter since January 2003 are shown in Figure 1.

Chlamydia cases reported in this quarter increased by 18.0% on the total of 3 297 in the equivalent quarter of 2007.

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

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





## **Gonorrhoea Results – October to December, 2008**

### **Gonorrhoea Incidence**

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

- Laboratories in the Auckland region tested 53 119 specimens for gonorrhoea, of which 470 (0.9%) specimens tested positive from 232 patients.
- Sixty 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 5 695 specimens for gonorrhoea, of which 47 (0.8%) specimens tested positive from 47 patients.
- Eighty-one 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 4 718 specimens for gonorrhoea, of which 62 (1.3%) specimens tested positive from 62 patients.
- Seventy-four 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.

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

- New laboratories reported 365 (1.2%) test-positive specimens for gonorrhoea from 334 patients.
- Sixty-four 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, October to December, 2008**

**Table 2.** Number of test-positive cases and rates of gonorrhoea, age group and sex:  
October to December 2008

Region	Age group (Yrs)	Number of test-positive cases				Rate per 100 000		
		Female	Male	Unknown	Total	Female	Male	Total
Auckland	<1	2	0	0	2	31.1	0.0	15.2
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	2	1	0	3	6.4	3.0	4.7
	15-19	29	37	0	66	90.9	114.3	102.7
	20-24	25	47	2	74	71.6	141.7	108.7
	25-29	12	24	0	36	37.0	81.2	58.1
	30-34	9	13	0	22	26.1	42.2	33.7
	35-39	2	8	0	10	5.7	25.3	15.0
	40+	3	15	0	18	1.8	9.7	5.6
	Unknown	1	0	0	1	-	-	-
	<b>Total</b>	85	145	2	232	19.8	35.5	27.7
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	0	0	0	0.0	0.0	0.0
	15-19	8	9	0	17	62.0	68.4	65.2
	20-24	7	14	0	21	62.2	120.5	91.9
	25-29	1	0	0	1	10.0	0.0	5.1
	30-34	1	0	0	1	8.8	0.0	4.6
	35-39	0	3	0	3	0.0	26.5	12.5
	40+	0	4	0	4	0.0	5.7	2.7
	Unknown	0	0	0	0	-	-	-
	<b>Total</b>	17	30	0	47	9.8	18.1	13.9
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	1	0	0	1	8.5	0.0	4.2
	15-19	6	14	0	20	60.1	133.0	97.5
	20-24	11	15	0	26	151.1	206.2	178.6
	25-29	3	3	0	6	38.6	41.8	40.1
	30-34	2	3	0	5	20.8	35.6	27.7
	35-39	0	1	0	1	0.0	10.5	4.9
	40+	2	0	0	2	2.8	0.0	1.5
	Unknown	1	0	0	1	-	-	-
	<b>Total</b>	26	36	0	62	17.3	25.2	21.1
New Laboratories	<1	0	0	0	0			
	1-9	2	0	0	2			
	10-14	6	0	0	6			
	15-19	66	46	0	112			
	20-24	46	53	2	101			
	25-29	21	31	0	52			
	30-34	6	17	0	23			
	35-39	2	10	0	12			
	40+	6	16	0	22			
	Unknown	1	1	2	4			
	<b>Total</b>	156	174	4	334			

## Gonorrhoea trends: Auckland, Waikato and BOP Regions

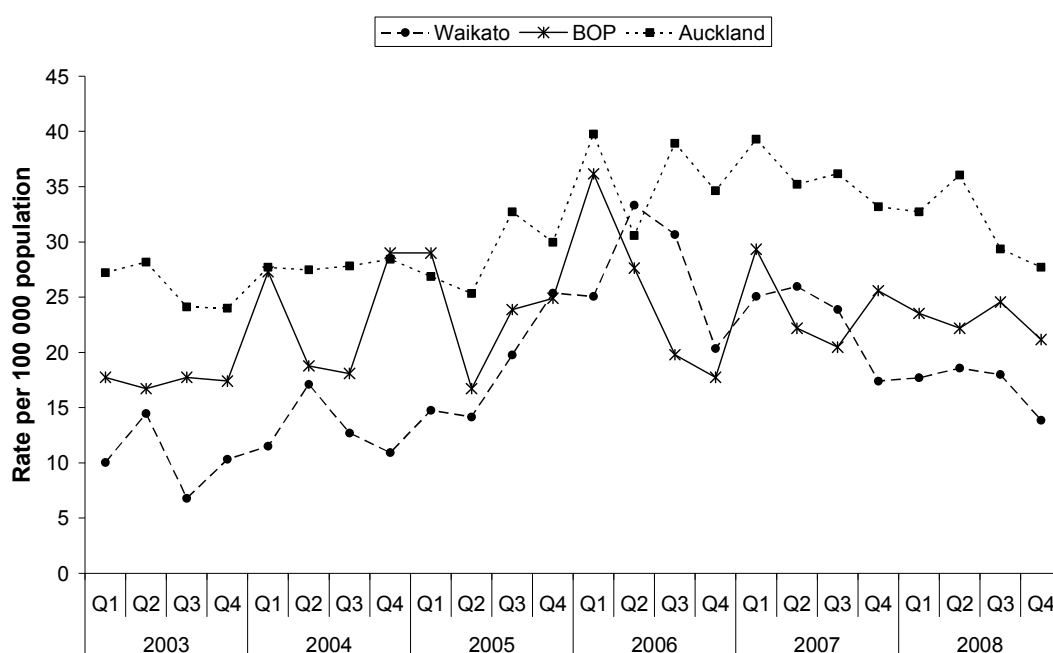
In the last quarter of 2008, a total of 341 cases of gonorrhoea were reported. This represents a rate of 23.2 per 100 000 population (Auckland: 27.7 per 100 000; Waikato: 13.9 per 100 000; BOP: 21.1 per 100 000).

Compared to the previous quarter, the number of gonorrhoea diagnoses decreased by 5.7% in the Auckland region, 23.0% in Waikato region and 13.9% in the BOP region.. Gonorrhoea rates by quarter since January 2003 are shown in Figure 2.

Gonorrhoea cases reported in this quarter decreased by 17.2% on the total of 412 in the equivalent quarter of 2007. The largest decrease (20.3%) was seen in the Waikato region (59 in Quarter 4 2007, compared to 47 in Quarter 4 2008).

The rate of gonorrhoea in the Waikato region was significantly lower than the Auckland and BOP regions. However there was no significant difference in the rate of gonorrhoea in the Auckland 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 December 2008



## Appendix A

STI surveillance data is received from the following laboratories:

- Kaitaia Hospital Laboratory, Northland (Chlamydia only)
- Bay of Islands Hospital Laboratory, Northland (Chlamydia only)
- Northland Pathology Laboratory, Northland
- Whangarei Hospital Laboratory, Northland (Chlamydia only)
- Dargaville Hospital Laboratory, Northland (Chlamydia only)
- North Shore Hospital Laboratory, Waitemata (Chlamydia only)
- LabPlus, Auckland
- Diagnostic Medlab, Auckland
- Middlemore Hospital Laboratory, Counties-Manukau
- Waikato Hospital Laboratory, Waikato
- Medlab Hamilton, Waikato
- Pathlab Waikato, Waikato
- Thames Hospital, Waikato (Chlamydia only)
- Tokoroa Hospital, Waikato (Chlamydia only)
- Te Kuiti Hospital, Waikato
- Taumarunui Hospital, Waikato (Chlamydia only)
- Pathlab 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)
- Hawke's Bay Hospital, Hawke's Bay
- Hawke's Bay Southern Community Laboratory, Hawke's Bay
- Taranaki MedLab, Taranaki
- Medlab Central, MidCentral
- Hutt Hospital Laboratory, Hutt Valley
- Aotea Pathology, Capital & Coast (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
- Dunstan Southern Community Laboratory, Otago
- Queenstown Southern Community Laboratory, Southland
- Gore Southern Community Laboratories, Southland
- Invercargill Southern Community Laboratory, Southland