

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

October to December 2007

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by

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**This report is available on the Internet at www.surv.esr.cri.nz
Ad Hoc STI data requests may be emailed to 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) 2007 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.

All results and analyses are based on data submitted prior to the 12th February 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. Of these, 35 laboratories submitted chlamydia data for the fourth quarter (October to December) 2007. 5/35 (14.3%) of laboratories were not able to provide chlamydia data by the date required for all three months in this quarter.

Gonorrhoea data

Thirty-one laboratories provide gonorrhoea data for STI surveillance. All 31 laboratories submitted chlamydia data for the fourth quarter (October to December) 2007. 1/31 (3.2%) of laboratories were not able to provide chlamydia data by the date required for all three months in this quarter.

Of all test-positive data submitted 1.8% were of unknown age and 0.4% were of unknown sex.

Chlamydia Results – October to December, 2007

Chlamydia Incidence

Auckland Region (see table 1)

- Laboratories in the Auckland region tested 34 389 specimens for chlamydia, of which 2 281 (6.6%) specimens tested positive from 2 181 patients.
- Sixty-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.

Waikato region (see table 1)

- Laboratories in the Waikato region tested 7 592 specimens for chlamydia, of which 451 (5.9%) specimens tested positive from 444 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 6 118 specimens for chlamydia, of which 677 (11.1%) specimens tested positive from 672 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 1 815 (10.4%) test-positive specimens for chlamydia from 1 725 patients.
- Seventy-three percent of all positive patients were aged 15 to 24 years.
- The highest number of chlamydia was found 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, 2007

Table 1. Number of test-positive cases and rates of chlamydia, age group and sex:
October to December 2007

Region	Age group (Yrs)	Number of test-positive cases				Rate per 100 000		
		Female	Male	Unknown	Total	Female	Male	Total
Auckland	<1	8	15	1	24	82.4	147.1	120.6
	1-9	2	0	0	2	2.4	0.0	1.2
	10-14	12	1	0	13	24.4	1.9	12.9
	15-19	597	127	1	725	1203.7	250.1	722.2
	20-24	521	143	2	666	1031.2	290.8	668.1
	25-29	255	99	1	355	540.4	228.6	392.3
	30-34	104	68	0	172	197.4	144.7	172.6
	>34	129	92	0	221	38.6	30.4	34.7
	Unknown	0	0	3	3			
	Total	1628	545	8	2181	240.6	84.8	165.3
Waikato	<1	1	2	0	3	40.6	79.2	60.1
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	5	1	0	6	37.8	7.0	21.9
	15-19	140	35	0	175	1084.8	266.1	671.5
	20-24	99	45	0	144	880.2	387.4	629.8
	25-29	29	20	0	49	289.9	207.0	249.2
	30-34	21	13	0	34	185.7	127.4	158.0
	>34	14	5	0	19	15.6	6.1	11.1
	Unknown	9	5	0	14			
	Total	318	126	0	444	183.7	75.9	130.9
Bay of Plenty	<1	3	0	0	3	146.4	0.0	71.0
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	20	3	0	23	169.6	24.4	95.6
	15-19	301	56	0	357	3013.0	531.8	1739.8
	20-24	119	49	0	168	1634.4	673.5	1154.2
	25-29	37	16	0	53	475.5	223.0	354.3
	30-34	21	12	0	33	218.1	142.3	182.8
	>34	13	18	0	31	15.7	24.1	19.7
	Unknown	0	0	4	4			
	Total	514	154	4	672	341.4	107.9	229.2
New Laboratories	<1	4	3	0	7			
	1-9	1	0	0	1			
	10-14	34	1	0	35			
	15-19	606	138	2	746			
	20-24	352	160	2	514			
	25-29	106	65	0	171			
	30-34	55	28	0	83			
	>34	46	39	0	85			
	Unknown	39	42	2	83			
	Total	1243	476	6	1725			

Chlamydia trends: Auckland, Waikato and BOP Regions

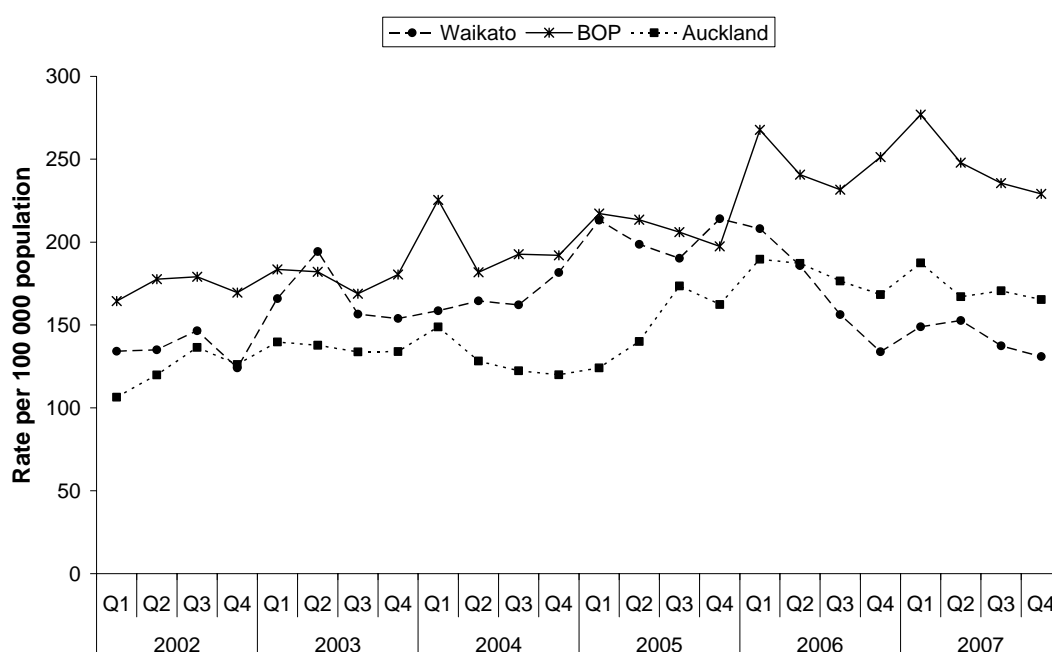
In the fourth quarter of 2007, a total of 3 297 cases of chlamydia were reported. This represents a rate of 168.9 per 100 000 population (Auckland: 165.3 per 100 000; Waikato: 130.9 per 100 000; BOP: 229.2 per 100 000).

Compared to the previous quarter, the number of chlamydia diagnoses decreased by 3.1% in the Auckland region, 4.7% in the Waikato region and 2.7% in the BOP region. Chlamydia rates by quarter since January 2002 are shown in Figure 1.

Chlamydia cases reported in this quarter decreased by 3.3% on the total of 3 411 in the equivalent quarter of 2006. The largest decrease (8.8%) was seen in the BOP region (737 in Quarter 4 2006, compared to 672 in Quarter 4 2007).

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 2002 to December 2007



Gonorrhoea Results – October to December, 2007

Gonorrhoea Incidence

Auckland Region (see table 2)

- Laboratories in the Auckland region tested 56 946 specimens for gonorrhoea, of which 581 (1.0%) specimens tested positive from 278 patients.
- Fifty-seven 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.

Waikato region (see table 2)

- Laboratories in the Waikato region tested 9 462 specimens for gonorrhoea, of which 70 (0.7%) specimens tested positive from 59 patients.
- Sixty-nine 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.

Bay of Plenty Region (see table 2)

- Laboratories in the BOP region tested 5 439 specimens for gonorrhoea, of which 81 (1.5%) specimens tested positive from 75 patients.
- Seventy-six percent of all positive patients were aged 15 to 24 years.
- The highest rates of gonorrhoea in both females and males were in the 20 to 24 years age group.

New laboratories (see table 2)

- New laboratories reported 317 (1.0%) test-positive specimens for gonorrhoea from 279 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, October to December, 2007

Table 2. Number of test-positive cases and rates of gonorrhoea, age group and sex:
October to December 2007

Region	Age group (Yrs)	Number of test-positive cases				Rate per 100 000		
		Female	Male	Unknown	Total	Female	Male	Total
Auckland	<1	1	0	0	1	15.6	0.0	7.6
	1-9	0	0	0	0	0.0	0.0	0.0
	10-14	2	0	0	2	6.4	0.0	3.1
	15-19	38	45	0	83	119.1	139.0	129.1
	20-24	30	45	1	76	85.9	135.7	111.7
	25-29	17	24	1	42	52.4	81.2	67.7
	30-34	11	18	0	29	32.0	58.5	44.5
	>34	14	31	0	45	6.9	16.7	11.5
	Unknown	0	0	0	0			
	Total	113	163	2	278	26.3	39.9	33.2
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	1	1	0	2	7.6	7.0	7.3
	15-19	8	13	0	21	62.0	98.8	80.6
	20-24	12	8	0	20	106.7	68.9	87.5
	25-29	3	8	0	11	30.0	82.8	55.9
	30-34	0	2	0	2	0.0	19.6	9.3
	>34	0	3	0	3	0.0	3.7	1.7
	Unknown	0	0	0	0			
	Total	24	35	0	59	13.9	21.1	17.4
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	1	0	2	8.5	8.1	8.3
	15-19	12	17	0	29	120.1	161.4	141.3
	20-24	13	15	0	28	178.5	206.2	192.4
	25-29	1	4	0	5	12.9	55.7	33.4
	30-34	2	3	0	5	20.8	35.6	27.7
	>34	2	4	0	6	2.4	5.4	3.8
	Unknown	0	0	0	0			
	Total	31	44	0	75	20.6	30.8	25.6
New Laboratories	<1	0	1	0	1			
	1-9	0	0	0	0			
	10-14	5	2	0	7			
	15-19	62	46	0	108			
	20-24	36	47	1	84			
	25-29	14	25	0	39			
	30-34	5	11	0	16			
	>34	4	20	0	24			
	Unknown	0	0	0	0			
	Total	126	152	1	279			

Gonorrhoea trends: Auckland, Waikato and BOP Regions

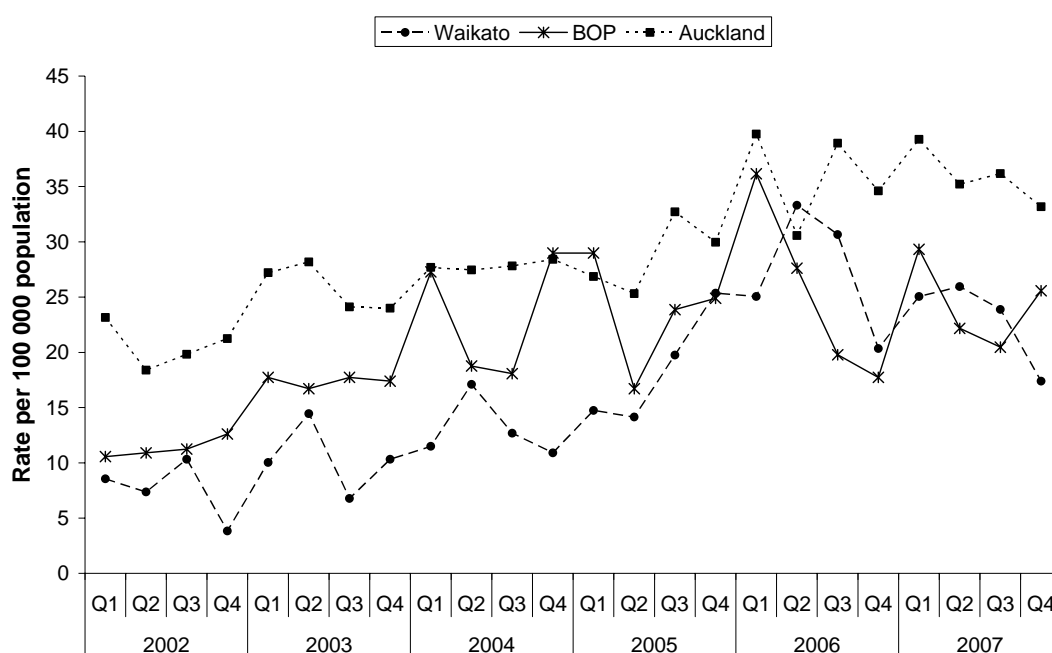
In the fourth quarter of 2007, a total of 412 cases of gonorrhoea were reported. This represents a rate of 28.0 per 100 000 population (Auckland: 33.2 per 100 000; Waikato: 17.4 per 100 000; BOP: 25.6 per 100 000).

Compared to the previous quarter, the number of gonorrhoea diagnoses decreased by 8.3% in the Auckland region and 27.2% in the Waikato region. However, the number of gonorrhoea diagnoses increased by 25.0% in the BOP region. Gonorrhoea rates by quarter since January 2002 are shown in Figure 2.

Gonorrhoea cases reported in this quarter increased by 0.2% on the total of 411 in the equivalent quarter of 2006. The largest increase (44.2%) was seen in the BOP region (52 in Quarter 4 2006, compared to 75 in Quarter 4 2007).

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

Figure 2. Rate of gonorrhoea reported through laboratory surveillance in the Auckland, Waikato and BOP regions: January 2002 to December 2007



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)
- Taumarunui 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
- Gisborne Hospital Laboratory, Tairāwhiti (Gonorrhoea only as of Oct 2007)
- 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
- 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
- Gore Southern Community Laboratory, Southland