

**access**

Australian Collaboration  
for Chlamydia Enhanced  
Sentinel Surveillance

# General Practice Network Report

**An update of chlamydia testing and positivity**

Burnet Institute

July 2012

2008-2010

# AUSTRALIAN COLLABORATION FOR CHLAMYDIA ENHANCED SENTINEL SURVEILLANCE (ACCESS)

## General Practice Network report

### An update of chlamydia testing and positivity: 2008-2010

This annual report presents chlamydia testing and positivity rates in the General Practice Network of the Australian Collaboration for Chlamydia Enhanced Sentinel Surveillance (ACCESS) system for January-December 2010 and reports on trends from 2008 to 2010. The data in this report remains governed by the ACCESS collaboration and is not for general dissemination.

#### Funding

ACCESS was funded by the Australian Government Department of Health and Ageing (DoHA) through the Chlamydia Targeted Grants Program as a pilot project from 2007 to 2010. Since 2010, the GP network has continued operation through cooperation between the Burnet Institute and the good will of participating General Practices.

#### Governance and ethics

ACCESS is overseen by a national coordinating committee comprising of representatives from:

- Centre for Population Health, Burnet Institute, Melbourne, VIC
- The Kirby Institute, UNSW, Sydney, NSW
- National Serology Reference Laboratory Australia (NRL), Melbourne, VIC

The ACCESS General Practice (GP) network is governed by the GP Network Steering Committee comprising fourteen members. Ethics approval was provided by the Royal Australian College of General Practitioners (RACGP) National Research and Evaluation Ethics Committee on 12/10/2007 and is valid until 31/12/2015.

*Prepared by the Centre for Population Health, Burnet Institute  
June 2012*

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## Preface

ACCESS is an enhanced sentinel surveillance system designed to collect systematic data on uptake and outcome of chlamydia testing in clinical settings. First evaluated in 2010<sup>1</sup>, in its current *arrangement*, ACCESS involves five networks made up of general practices, sexual health clinics, family planning clinics, Aboriginal Community Controlled Health Services, and laboratories. Each network monitors chlamydia testing uptake and positivity in priority populations at risk of chlamydia: young people aged under 25 years, gay men and other men who have sex with men, Aboriginal and Torres Strait Islander peoples, and sex workers.<sup>2</sup>

## Acknowledgements

We would like to acknowledge all participating clinics and general practitioners in the GP network and the GP Network Steering Committee for their ongoing support of ACCESS.

### GP Network Steering Committee Membership

- Dr Jane Hocking (Chair), Key Centre for Women's Health, University of Melbourne, Carlton, VIC
- Dr Douglas Boyle, School Rural Health, University of Melbourne, Carlton, VIC
- Dr Tony Merritt, Public Health Physician, Hunter New England Population Health, Hunter New England Service Area, Wallsend, NSW
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<sup>1</sup> Guy, R., F. Kong, et al. A new national chlamydia surveillance system in Australia: Evaluation of the first stage implementation. *Communicable Disease Intelligence* 2010; 34(3): 319-328.

<sup>2</sup> Department of Health and Ageing. The Second National Sexually Transmissible Infections (STIs) Strategy 2010-2013. Canberra: Commonwealth of Australia 2010.

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## KEY FINDINGS FOR GENERAL PRACTICE NETWORK, 2010

### Report period:

- January-December 2010

### GP network:

#### Site participation

- In 2010, 17 general practice (GP) clinics– including 768 general practitioners – participated in ACCESS and provided consultation and chlamydia testing data on attending 16-29 year old individuals.

#### Patient characteristics

- A total of 22,913 individuals (61% female) aged 16-29 years attended GP network clinics in 2010.
- Of those aged 16-29 years old, 63% were 16-24 years old, the age group of particular interest to the GP network.

#### Chlamydia testing

- The overall chlamydia testing rate among 16-29 year olds was 12.0% among females and 6.4% among males.
- Among females, the testing rate was higher among 20-24 year olds (14.2%) than 16-19 year olds (11.8%) and 25-29 year olds (9.8%).
- Among males, the testing rate was higher among 20-24 year olds (8.4%) than 25-29 year olds (7.0%) and 16-19 year olds (2.9%).

#### Chlamydia positivity

- The overall positivity rate among 16-29 year olds was 9.2% among females and 16.7% among males.
- Among females, the positivity rate was higher in 16-19 year olds (12.6%) than 20-24 year olds (10.3%) and 25-29 year olds (4.7%).
- Among males, the positivity rate was higher among 16-19 year olds (19.0%) than 20-24 year olds (16.7%) and 25-29 year olds (16.0%)

### High case load of men who have sex with men clinics:

- Two clinics with high case load of men who have sex with men (MSM) participated in ACCESS and provided consultation and chlamydia testing data on attending 16-29 year old individuals.
- A total of 319 males aged 16-29 years attended high MSM case-load clinics in 2010.
- The overall testing rate among males was 43.3% in 2010.
- The positivity rate among males was 7.5% in 2010.

## General Practice (GP) network report

### 1 OBJECTIVE

In this report, we provide an update of chlamydia testing and positivity rates in the GP network by age group and sex in 2010 and report on trends between 2008 and 2010.

### 2 METHODS

#### 2.1 Participating GP clinics, 2010

In December 2011, there were 19 participating clinics able to provide chlamydia testing and outcome data for 2010 - eight less than at the end of the pilot period. Seven clinics withdrew following completion of the ACCESS pilot and one clinic had missing data in 2010 and has been excluded from analysis. See table 1 below for all clinics currently participating.

**Table 1: Participating GP clinics providing data for January-December 2010**

	<b>Clinic name</b>	<b>State</b>
1	Charlestown Family Medical Services	NSW
2	Brindabella Family Practice	NSW
3	O'Brien Street Practice	SA
4	Footscray Medical Centre	VIC
5	Goulburn River Group Practice	VIC
6	Wellness Centre Medical Clinic	VIC
7	Brighton Medical Clinic	VIC
8	Mooroopna Medical Centre	VIC
9	Duncraig Medical Centre	WA
10	AK Medical & Dental Centre	WA
11	Nambour Medical Centre	QLD
12	Eli Waters Medical Centre	QLD
13	Kewarra Family Practice	QLD
14	Davey Street Medical Centre	TAS
15	Newstead Medical	TAS
16*	NPI	SA
17*	NPI	VIC
18*	NPI	VIC
19*	NPI	VIC

\*NPI- not publically identifiable

#### 2.2 Target population and clinic location

The target population for the GP network is 16-29 year old females and males. An estimated 90% of Australian women and 70% of Australian men aged 15-24 years old present to a GP at least once

each year,<sup>3</sup> and the majority of chlamydia infections<sup>3</sup> in young people are diagnosed in general practice.<sup>2</sup>

Nineteen clinics provided data for this report, representing six of eight jurisdictions. Two sites were recruited from New South Wales, seven from Victoria, two from Western Australia, three from Queensland, two from South Australia and two from Tasmania (figure 1).

**Figure 1: Locations of participating clinics in the GP network, 2010**



### 2.3 Data collection, extraction and management

Data on all attending 16-29 year olds were collated from GP clinics participating in ACCESS during the study period: 1 January 2008 – 31 December 2010. The GP network results are based on 17 clinics; the results from two clinics with a high case load of men who have sex with men (MSM) are presented separately.

Non-identifiable routine attendance data (date of service, doctor name, clinic name, year of birth, sex and patient postcode) and chlamydia testing data (chlamydia test request and chlamydia test result) were retrospectively extracted from electronic patient records using the electronic data collection software tool, GRHANITE™.<sup>4</sup>

### 2.4 Data analysis

<sup>3</sup> Hocking JS, Walker J, Regan D et al. Chlamydia screening- Australia should strive to achieve what others have not. *MJA* 2008;188:106-108

<sup>2</sup> Grulich AE, de Visser RO, Smith AM, et al. Sex in Australia: sexually transmissible infection and blood-borne virus history in a representative sample of adults. *Aust N Z J Public Health*. 2003;27:234-41.

<sup>4</sup> Boyle D, Kong F. A systematic mechanism for the collection and interpretation of display format pathology test results from Australian primary care records. *Electron J Health Inform* 2011;6:e18.

The following rates were calculated overall and by sex, age group, and clinic location:

- **Chlamydia testing rates** were determined as the proportion of attending individuals with at least one chlamydia test request in a 12-month period; and
- **Chlamydia positivity rates** were determined as the proportion of individuals tested, returning a positive result at any test within a 12 month period. Positivity rates presented in this report are based on where a test result is known.

Classification of clinic location was based on the Rural, Remote and Metropolitan Areas (RRMA) classification and defined as metropolitan or rural.<sup>5</sup>

### 3 RESULTS

The GP network results are based on 17 clinics; two clinics with a high case load of men who have sex with men (MSM) are excluded from overall GP network rates and are presented separately. Herein, GP network refers to 17 clinics, and High-case load clinics refer to the two clinics with a high case load of men who have sex with men (MSM).

#### 3.1 Individuals attending GP network clinics

##### *Overall characteristics*

In total, 22,913 individuals attended 17 participating clinics in 2010, of which 61% were female (table 2). A total of 26% were aged between 16-19 years, 26% were aged between 20-24 years and 37% were aged between 25-29 years. Overall, 77% of individuals attended clinics located in a major-city. The age and sex profile of individuals attending participating GP clinics did not change between 2008 and 2010, but in 2010 a higher proportion of individuals attending clinics located in a major-city are represented.

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<sup>5</sup> Department of Primary Industries and Energy. Rural, Remote and Metropolitan Areas (RRMA) (cat. no. 94 3091), Canberra: Department of Primary Industries and Energy; 1994.



**Table 2: Demographic profile of individuals attending the 17 clinics in the GP network, 2008-2010**

Characteristic		Individuals					
		2008		2009		2010	
		n	%	n	%	n	%
<b>Overall</b>	16-29	18,646	100	23,138	100	22,913	100
<b>Age group (years)</b>	16-19	5,239	28.1	6,052	26.2	6,049	26.4
	20-24	6,746	36.2	8,715	37.7	8,400	36.7
	25-29	6,661	35.7	8,371	36.2	8,464	36.9
<b>Sex</b>	Males	7,144	37.0	8,909	38.6	8,879	38.8
	Females	11,502	63.0	14,229	61.4	14,034	61.2
<b>Clinic location</b>	Metropolitan	13,304	71.4	17,874	77.2	17,610	76.9
	Rural	5,332	28.6	5,257	22.7	5,299	23.1

#### Aboriginal and Torres Strait Islander status

Of all individuals attending the GP network in 2010, 11,563 (50.0%) had complete data on Aboriginal and/or Torres Strait Islander status. Of these, 475 (4.0%) identified as Aboriginal and/or Torres Strait Islander. Across all three years (2008-2010), 33.0% of individuals attending the GP network had complete data on Aboriginal and/or Torres Strait Islander status, of which 5.2% were Aboriginal and/or Torres Strait Islander. Due to low completeness of this variable, chlamydia testing and positivity rates are not presented by Aboriginal and/or Torres Strait Islander status.

### 3.2 Chlamydia testing rates

Testing rates by sex and age group from 2008-2010 are presented in Table 3.

The overall testing rate among 16-29 year old individuals attending the GP network in 2010 was 9.8%; the testing rate was substantially higher among females (12.0%) than males (6.4%).

**Females:** The testing rate among 16-29 year old females was 12.0%; and was higher among 20-24 year old females than 16-19 year olds and 25-29 year olds (14.2%, 11.8% and 9.8% respectively).

The testing rate among females of all age groups increased from 2008 to 2010 (figure 2); among 16-19 year olds from 10.3% (2008) to 11.8% (2010); among 20-24 year olds from 12.4% (2008) to 14.2% (2010); and among 25-29 year olds from 8.5% (2008) to 9.8% (2010).

**Males:** The testing rate among 16-29 year old males was 6.4%; and was higher among 20-24 year old males (7.8%) than 25-29 year olds (6.6%) and 16-19 year olds (2.7%).

The testing rate among males aged 20-24 years increased between 2008 and 2010, from 6.8% to 8.4%, but remained similar in other age groups (figure 2).

Figure 2: GP network testing rates by sex and age group, 2008-2010

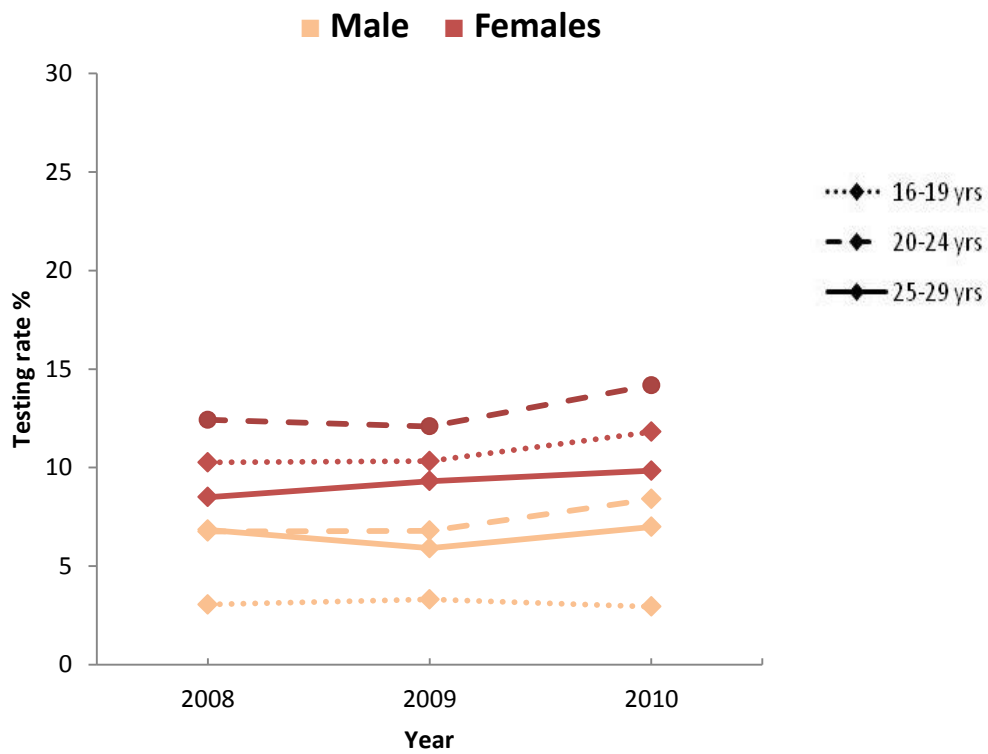
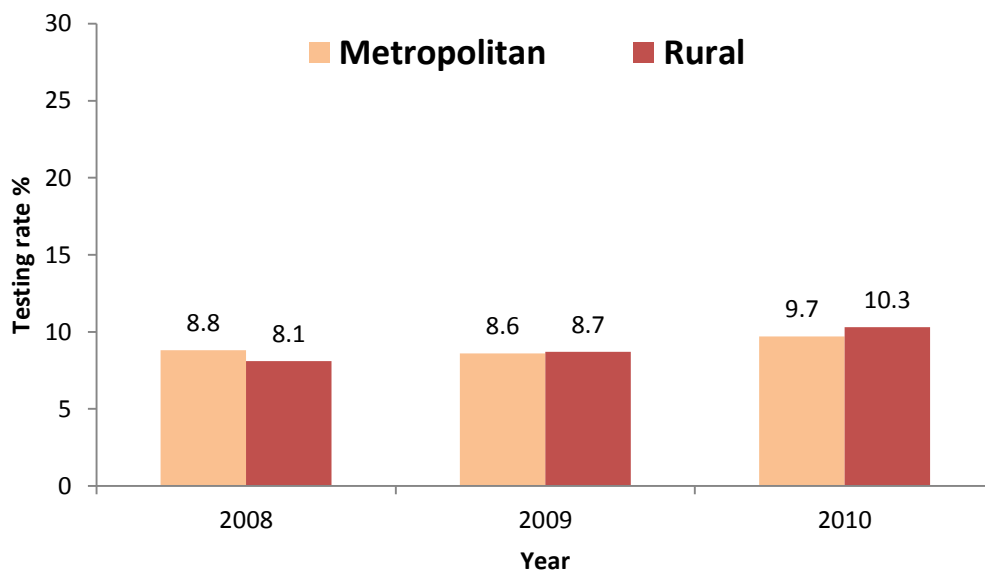


Figure 3: GP network testing rate among 16-29 year olds, by remoteness area, 2008-2010



Chlamydia testing rates were similar in metropolitan and rural clinics in all years; in both settings, testing rates increased over time (figure 3).

**Table 3: GP network overall testing rates by sex and age group at 17 clinics, Australia 2008-2010**

	Age group	2008			2009			2010		
		Individuals	Chlamydia testing rate*		Individuals	Chlamydia testing rate*		Individuals	Chlamydia testing rate*	
		n	n	%	n	n	%	n	n	%
Overall	Years									
	16-19	5,239	389	7.4	6,052	458	7.6	6,049	500	8.3
	20-24	6,746	693	10.3	8,715	881	10.1	8,400	1,010	12.0
	25-29	6,661	524	7.9	8,371	668	8.0	8,464	738	8.7
	All (16-29)	18,646	1,606	8.6	23,138	2,007	8.7	22,913	2,248	9.8
Females	16-19	3,176	326	10.3	3,668	379	10.3	3,632	429	11.8
	20-24	4,196	521	12.4	5,458	660	12.1	5,269	747	14.2
	25-29	4,130	351	8.5	5,103	475	9.3	5,133	505	9.8
	All (16-29)	11,502	1,198	10.4	14,229	1,514	10.6	14,034	1,681	12.0
Males	16-19	2,063	63	3.1	2,384	79	3.3	2,417	71	2.9
	20-24	2,550	172	6.8	3,257	221	6.8	3,131	263	8.4
	25-29	2,531	173	6.8	3,268	193	5.9	3,331	233	7.0
	All (16-29)	7,144	408	5.7	8,909	493	5.5	8,879	567	6.4

\*Chlamydia testing rates were determined as the proportion of attending individuals with at least one chlamydia test request in a 12 month period.

### 3.3 Chlamydia positivity rates

Positivity rates by sex, age group and overall from 2008-2010 are presented in Table 4.

Positivity rates presented in this report are based on individuals tested for whom a result is known. In 2010, 2,025 (90.1%) of individuals with a chlamydia test request had a known result. A test result may be unknown if a GP requested a chlamydia test but the individual did not actually have a chlamydia test or if the test result was not electronically recorded.

**Overall:** The overall positivity rate among 16-29 year old individuals attending the GP network in 2010 was 10.9%; the positivity rate was higher among males (16.7%) than females (9.2%).

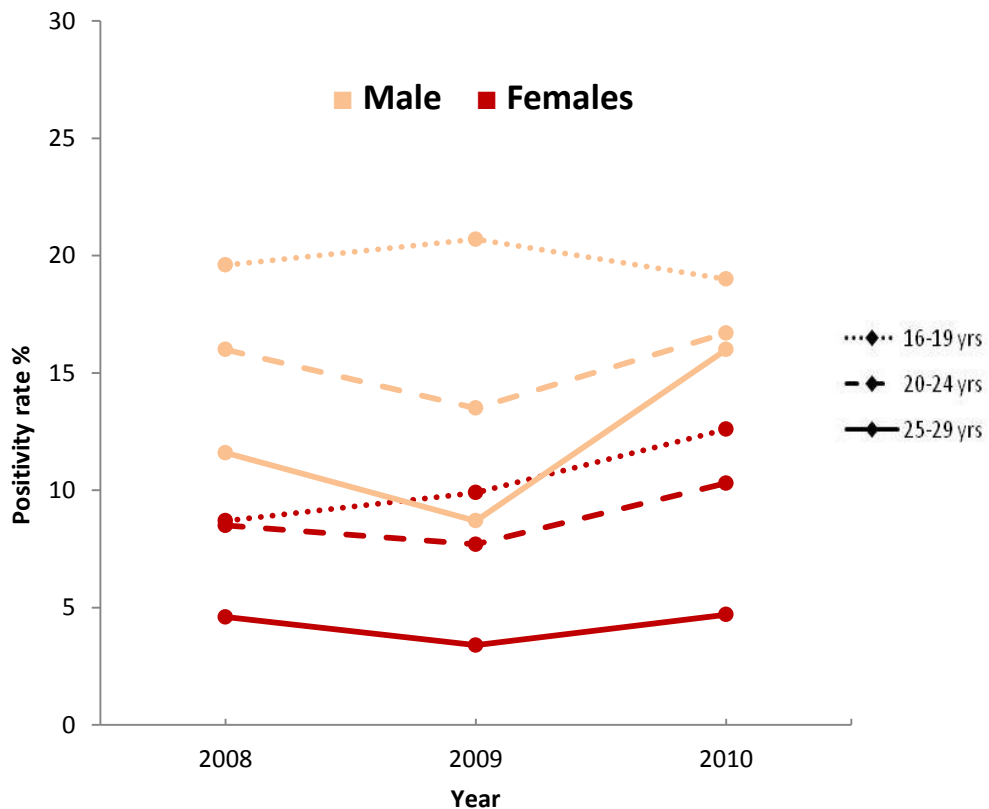
**Females:** The chlamydia positivity rate among 16-29 year old females was 9.2% in 2010 and was higher among 16-19 year olds (12.6%) than females aged 20-24 years (10.3%) and 25-29 years (4.7%).

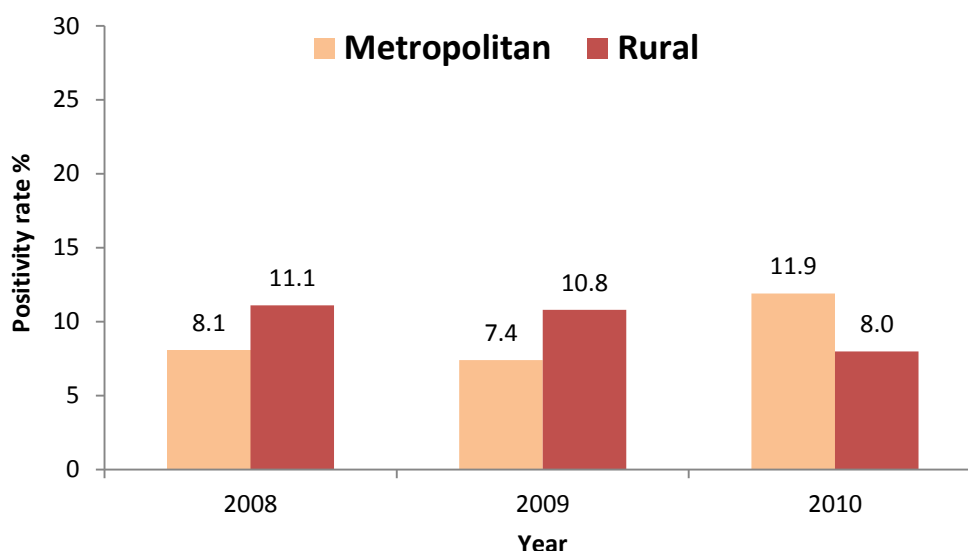
Chlamydia positivity rates increased over time among younger females; in 16-19 year olds from 8.7% (2008) to 12.6% (2010), in 20-24 year olds from 8.5% (2008) to 10.3% (2010) and did not change among 25-29 year olds.

**Males:** The chlamydia positivity rate among 16-29 year old males was 16.7% in 2010. The positivity rate was higher among 16-19 year old males (19.0%) than 20-24 year old males (16.7%) and 25-29 year olds (16.0%).

The positivity rate increased among males aged 25-29 years from 11.6% (2008) to 16% (2010).

**Figure 4: GP network positivity rates by sex and age group, 2008-2010**



**Figure 5: GP network positivity rate among 16-29 year olds, by remoteness area, 2008-2010**


In 2010, chlamydia positivity among 16-29 year olds was higher among individuals attending clinics located in major cities (11.9%) compared to non-major cities (8.0%). This was in contrast to 2008 and 2009 when positivity was higher among individuals attending non-major city clinics (figure 5). Over time, chlamydia positivity among individuals attending major-city clinics increased and positivity among individuals attending non-major city clinics decreased.

**Table 4: GP network positivity rates by sex and age group, Australia 2008-2010**

	Age group	2008			2009			2010		
		Individuals tested*	Chlamydia positivity rate**		Individuals tested*	Chlamydia positivity rate**		Individuals tested*	Chlamydia positivity rate**	
		n	n	%	n	n	%	n	n	%
Overall	16-19	332	34	10.2	401	46	11.5	456	61	13.4
	20-24	582	59	10.1	773	70	9.1	909	108	11.9
	25-29	420	27	6.4	585	28	4.8	660	52	7.9
	All (16-29)	1,334	120	9.0	1,759	144	8.2	2,025	221	10.9
Females	16-19	286	25	8.7	343	34	9.9	398	50	12.6
	20-24	457	39	8.5	595	46	7.7	688	71	10.3
	25-29	308	14	4.6	436	15	3.4	472	22	4.7
	All (16-29)	1,051	78	7.4	1,374	95	6.9	1,558	143	9.2
Males	16-19	46	9	19.6	58	12	20.7	58	11	19.0
	20-24	125	20	16.0	178	24	13.5	221	37	16.7
	25-29	112	13	11.6	149	13	8.7	188	30	16.0
	All (16-29)	283	42	14.8	385	49	12.7	467	78	16.7

\*Individuals tested is the number of individuals tested for whom a test result is known.

\*\*Chlamydia positivity rates were determined as the proportion of individuals tested, returning a positive result at any test within a 12 month period.

### 3.4 High MSM case-load clinics

Testing and positivity rates for the two high MSM case-load clinics are presented separately (Table 5) from other GP network clinics because they are more akin to a sexual health clinic. A total of 443 individuals aged between 16-29 years old attended the two high MSM case-load clinics in 2010; 1,313 individuals attended between 2008 and 2010. Among males attending in 2010, the testing rate of 43.3% was substantially higher than found in general GP network sites (6.4%), and the positivity rate of 7.5% was lower than found in general GP network clinics (16.7%).

**Table 5: Testing and positivity rates at two high MSM case-load clinics, 2008-2010**

Age group	2008		2009		2010		
	Chlamydia testing rate*	Chlamydia positivity rate**	Chlamydia testing rate*	Chlamydia positivity rate**	Chlamydia testing rate*	Chlamydia positivity rate**	
	Years	%	%	%	%	%	
Overall	16-19	25.8	50.0	12.8	0.0	13.5	20.0
	20-24	43.9	14.9	31.2	16.3	35.0	0.0
	25-29	43.6	13.0	36.1	11.8	42.0	10.0
	All (16-29)	42.5	15.3	32.7	12.8	37.5	7.5
Females	16-19	18.8	66.7	15.8	0.0	20.0	33.3
	20-24	15.6	14.3	8.3	25.0	28.9	0.0
	25-29	20.0	14.3	11.9	0.0	18.8	8.3
	All (16-29)	18.4	20.8	11.2	6.7	22.6	7.4
Males	16-19	33.3	40.0	10.0	0.0	9.1	0.0
	20-24	55.5	15.0	41.3	15.6	38.0	0.0
	25-29	52.9	12.9	43.2	12.8	49.3	10.2
	All (16-29)	52.9	14.5	40.7	13.5	43.3	7.5

\***Chlamydia testing rates** were determined as the proportion of attending individuals with at least one chlamydia test request in a 12 month period.

\*\***Chlamydia positivity rates** were determined as the proportion of individuals tested, returning a positive result at any test within a 12 month period.