



An Intervention to Improve the Management of Chlamydia by GPs

**A report prepared for the Department of Health,
Western Australia**

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GLOSSARY

ACRRM	Australian College of Rural and Remote Medicine
AIDS	Acquired Immune Deficiency Syndrome
AMPCo	Australian Medical Publishing Company
ARCSHS	Australian Research Centre in Sex, Health and Society
CDC	Centre for Communicable Diseases
CME	Continuing Medical Education
DoH	Department of Health
FPA	Family Planning Association
GC	Gonococcus
GP	General Practitioner
GPs	General Practitioners
GSA	Gold Standard Answers
HIV	Human Immunodeficiency Virus
HSV	Herpes Simplex Virus
MC&S	Microscopy, Culture and Sensitivity Testing
NA	Not Applicable
NAT	Nucleic Acid Testing
PCR	Polymerase Chain Reaction
PDF	Portable Document Format
PDP	Professional Development Program
PHCRIS	Primary Health Care Research and Information Services
PID	Pelvic Inflammatory Disease
PLP	Personal Learning Plan
QA&CPD	Quality Assurance and Continuing Professional Development
RACGP	Royal Australian College of General Practitioners
RACOG	Royal Australian College of Obstetricians and Gynaecologists
RANZCOG	Royal Australian and New Zealand College of Obstetricians and Gynaecologists
RRMA	Rural, Remote and Metropolitan Areas
SA	South Australia
SMS	Short Message Service
STI	Sexually Transmissible Infection
STIs	Sexually Transmissible Infections
TAFE	Technical and Further Education
TOP	Termination of Pregnancy
VDRL	Venereal Diseases Research Laboratories
WA	Western Australia
WACRRM	Western Australian College of Rural and Remote Medicine

1. EXECUTIVE SUMMARY

In response to increasing rates of chlamydia, a preventable sexually transmissible infection which causes infertility, the Department of Health Western Australia conducted a mass media campaign aimed at young people aged 15-25 years. The campaign, launched in June 2005, encouraged them to seek chlamydia testing from their GP.

To ensure success of the campaign it was important that GPs were adequately prepared to both respond to increased requests for tests and to suggest testing to young people they assessed as being at risk of chlamydia. The Australian Research Centre in Sex, Health and Society (ARCSHS) was asked to survey GPs about their chlamydia knowledge and practices and to offer support to GPs who wished to improve their skills in this area.

To establish a baseline measure of GPs' chlamydia-related knowledge and practices prior to the campaign, a questionnaire was sent from ARCSHS to all 2038 GPs in WA. Questions covered the clinical features of chlamydia, investigations, treatment and public health issues. In all, 576 GPs responded, a response rate of 29%.

While most GPs in WA were aware that chlamydia was commonly seen in the 20-24 year old age group, less than half were aware chlamydia is also commonly seen in the 15-19 year old group. These results suggest that GPs may be missing opportunities to assess the likelihood of chlamydia in many of those most at risk.

Results showed that while GPs were generally willing to take a sexual history from patients with an obvious STI risk, other opportunities where sexual risk assessment could be easily justified to the patient, such as during a Pap smear test and in a consultation about contraception, were not as readily taken up, particularly by male GPs. Similarly, questions about specific sexual practices which are essential to ensure investigations are performed correctly, were less frequently asked than questions of a more general nature.

While GPs were more confident about symptoms of chlamydia in female than male patients, findings suggested that when a GP suspected chlamydia, appropriate investigations and treatment are carried out. Most GPs performed appropriate tests for both symptomatic and asymptomatic patients. Presumptive treatment was reasonably common for a patient with suspected chlamydia, with confirmatory tests almost always done. Almost all GPs knew of the existence of an effective single dose treatment for chlamydia.

Of most concern were GPs' practices in relation to public health more generally. Whilst almost all GPs knew that chlamydia was notifiable, some GPs stated that they do not usually notify WA Health of such infections. Less than one-quarter of GPs saw contact tracing as their responsibility, with a third not even usually asking a patient for details about their sex partners for contact tracing purposes.

As part of the chlamydia campaign, both respondents and non-respondents to the GP survey received gold standard answers to the questionnaire so that they all had an opportunity to improve their knowledge and skills in this area. GPs who completed the survey were also given the opportunity to undertake a clinical audit to further improve their skills and to earn the professional development points necessary for their ongoing registration as GPs. Thirty-two GPs took up this option.

An analysis of Health Insurance Commission data was also conducted to determine whether an increase in Medicare rebates for chlamydia testing was evident over the course of the campaign. Results showed a definite, although short-lived, impact on testing, suggesting either that GPs had exhausted the pool of patients they could identify as at risk of chlamydia, or that their attention was subsequently diverted to other health issues.

SUMMARY OF RECOMMENDATIONS

Recommendation 1

- Promotion of the DoH WA website in a wide range of professional associations/organisations and journals.

Recommendation 2

- Improve levels of GP knowledge about their legal requirement to notify DoH WA of diseases gazetted under *Health Act 1911*.

Recommendation 3

- Work with GPs, as primary care providers, to encourage higher rates of contact tracing.
- Work with RACGP WA and WACRRM to promote the public health responsibilities of GPs with regard to contact tracing.
- DoH WA should invest in contact tracing services to support GPs to follow up index and named contacts.

Recommendation 4

- Work with RACGP WA and WACRRM to develop appropriate skills-based education programs.
- Develop a check list so that GPs can monitor their own practice and respond to shortfalls in practice.
- DoH WA and GPs should work together to implement the RACGP Red Book recommendations for chlamydia screening.

Recommendation 5

- DoH WA should develop a long term strategy for sexual health and STI management education for GPs.
- Periodic sexual health social marketing should be continued, but for prolonged periods. Evaluation for sustained STI testing and changes to notification rates is essential.
- Specific and targeted social marketing strategies must be developed to meet the needs of rural and remote populations as evidenced by the lack of impact of the campaign in testing or notifications.

2. INTRODUCTION

Chlamydia trachomatis is the most common sexually transmissible infection (STI) in Australia. Left untreated, it can have extremely serious consequences. In women, chlamydia can cause pelvic inflammatory disease, ectopic pregnancy and infertility. In men, chlamydia may result in urethritis and sterility.

In Western Australia (WA), as in other parts of Australia, rates of chlamydia have been rising. Rates have increased four-fold in the last ten years with 60% of notifications occurring in 15-19 year olds. More than half of WA's chlamydia notifications have been recorded consistently from the Perth metropolitan area, although the crude notification rate for chlamydia was 6 times higher in remote than metropolitan areas. Despite these rates, it is believed that clinicians under-notify the infection.

In the last few years there has been great improvement in both chlamydia testing and treatment which makes this infection far easier to diagnose and manage. While it is likely that STIs form a small part of most Australian GPs' caseloads, the majority of cases of chlamydia are diagnosed in general practice. Given that more than 80% of Australians can name a GP as their family doctor, GPs are well-placed to manage this often asymptomatic and curable infection opportunistically.

The Western Australian Department of Health (DoH WA) developed a two pronged campaign - *Chlamydia: most people haven't got a clue*. The mass media arm of the campaign targeted young people (15-25 years old, the group with the highest recorded rates of infection) to increase numbers requesting a chlamydia test from their GPs. The GP arm of the campaign also aimed to improve GPs' knowledge and skills in chlamydia testing and clinical management.

Campaign Details

The campaign was launched in June 2005 with the aim of increasing the number of young people going to their GP for a chlamydia test. While focused on and targeting young people of 15-25 years of both genders, the campaign was slightly skewed towards gaining the attention of young men, primarily through specially created mirror posters which were displayed in men's toilets at universities and TAFE colleges.

The campaign used popular media strategies, such as radio announcements, a website, SMS and emails, as a way of reaching its audience. This strategy was chosen because DoH WA felt that a radio/press campaign gave good coverage for the allotted budget.

The SMS campaign targeted young people over 18. DoH WA accessed mobile numbers by paying the commercial company Blue Sky Frog. People enrol with this company and receive spam and advertising messages in exchange for free ring tones and wall paper for the screen of their mobile phone. DoH WA also accessed its Quit database on which people could elect to be included in order to receive other health messages. This is a free service.

SMS Messages

Message 1	CHLAMYDIA
Message 2	ITS THAT EZ 2 TRANSMIT BUT 70% WHO GET IT DONT KNO THEY HAV IT. IF UV HAD UNPROTECTED SEX C UR GP & VISIT COULDIHAVEIT.COM.AU

The media campaign, including SMS, officially started in the week beginning 20 June and officially finished on Saturday 20 August. At the time of writing this report the posters in toilets and venues were still up, so technically the media campaign has not yet finished. When DoH WA developed the campaign contract, no-one was contracted to remove the posters and so they will remain up indefinitely.

As the campaign encouraged young people to visit their GP it was envisaged that GPs would receive more requests for testing for both chlamydia and other STIs.

DoH WA developed a campaign kit for GPs with the following resources:

- Guide to testing for chlamydia
- Sample partner notification letter
- Gold Standard Answers (for questionnaire sent by the Australian Research Centre for Sexual Health and Society (ARCSHS))
- Campaign poster for placement in waiting area or consultation room
- Campaign brochure
- Resource order form for multiple copies of DoH WA sexual health resources.

GPs were encouraged to obtain pamphlets and posters about chlamydia and other STIs, and STI clinical management guidelines which were available free of charge from DoH WA. Ordering information was placed on the campaign website and direct contact details for DoH WA were also provided (www.couldihaveit.com.au/campaign.asp)

Materials supporting the campaign – an introductory letter, A3 poster and brochure - were sent to:

- Medical Centres
- Women's Health Centres
- Sexual Health Clinics
- Regional Community Health Nurses
- Regional Health Promotion Officers
- Healthinfo (WA 1800 public information line)
- other DoH WA stakeholders.

The Role of the Australian Research Centre in Sex, Health and Society (ARCSHS)

ARCSHS was contracted to develop a questionnaire to encourage GPs to think about practices in relation to chlamydia and thereby to support them to increase their chlamydia testing rate. This was undertaken through the use of a GP survey *Chlamydia and Sexual Health Questionnaire* distributed prior to the launch of the mass media campaign.

Chlamydia and Sexual Health Questionnaire

The questionnaire, developed by ARCSHS with input from DoH WA, was sent to GPs before the media campaign started to raise awareness of chlamydia, to determine levels of knowledge and to encourage GPs to reflect on their practice in relation to STIs in general.

The GP survey of chlamydia testing practices was also a way of predisposing GPs to the GP education material which was to be distributed as part of the campaign. The questionnaire itself served as part of the intervention by alerting GPs to the forthcoming campaign.

2038 questionnaires were compiled and mailed to all GPs in WA on 12 May 2005 using a data base of addresses provided by DoH WA. The deadline for return was June 30; the first returns arrived on 19 May 2005 and the last returns arrived 22 August 2005. All questionnaires received before June 30 were entered into a draw to win a case of wine.

Promotion of Questionnaire

An article describing the forthcoming survey was published in Medical Forum (the monthly newsletter of the Royal Australian College of General Practitioners, WA). DoH WA managed promotion of the whole chlamydia campaign. This included three Fax Alerts to all GPs to remind them of deadlines for return of questionnaires. The first Fax Alert went out on 6 May before the questionnaires were sent. The second Fax Alert went out on 20 May, after the questionnaires had been sent. The final Fax Alert - a reminder for GPs to return the questionnaires - was sent on 21 June. June 30 was deemed to be the final deadline for receipt of questionnaires.

Gold Standard Answers (GSAs)

Gold Standard Answers (GSAs) were compiled in consultation with DoH WA. These were mailed out on the day of receipt of completed questionnaires as far as possible; but certainly GPs would have received them within a week. GSAs were sent to all GPs who completed the questionnaire even if it was returned after the final deadline.

GSAs were also sent to all GPs as part of the DoH WA Chlamydia promotion kit so even those GPs who chose not to complete the questionnaire would have received the most current information about chlamydia and sexual health issues.

Clinical Audit

When the questionnaires were first sent out, GPs were offered the opportunity to participate in a clinical audit to gain either 30 professional development points from the RACGP or 20 professional development points from the Australian College of Rural and Remote Medicine (ACRRM). They indicated their interest in participating in the clinical audit on the completed and returned questionnaires. Participation in the audit provided GPs with the opportunity to get the current information about chlamydia, to reflect on their practice in sexual health including taking sexual histories, testing, contact tracing and also to gain professional development points.

Participating in the audit required GPs to collect data over a fixed period of time and within a defined age range of patients to document their practices in relation to sexual history taking, assessment of risk for chlamydia, and chlamydia testing.

Audit results helped to demonstrate GPs' practices in relation to young people attending for reproductive and sexual health consultations, and particularly those seeking testing for chlamydia.

The audit was developed, according to RACGP and ACRRM guidelines, and in consultation with the DoH WA, ACRRM and RACGP WA.

GPs participating in the audit received an initial package with:

- covering letter co-signed by ARCSHS and DoH WA
- one page description of process
- one page Pre-audit Questionnaire
- twenty copies of a double-sided page Data Collection Form
- twenty copies of 1 page Participant Informed Consent Form
- one page Registration Form
- one page Resource Order Form (DoH WA)
- one reply paid envelope for their 20 completed Data Collection Forms and the Registration Form.

When all GPs had completed and returned the 20 Data Collection Forms the data were analysed and documented on the Data Feedback sheet.

In the next mail out from ARCSHS the GPs received:

- one page Data Feedback Form with individual and pooled results
- GPs Reflection on the Data form
- Activity Evaluation Sheet.

The GPs were required to return their completed Reflection on the Data form and the Activity Evaluation to ARCSHS. On receipt of these the GPs were sent their Certificates of Participation. As required ARCSHS sent an attendance list of all participating GPs with appropriate records to RACGP WA and ACRRM so that CME points could be allocated to the GPs records.

Support Materials

GPs were directed to a page on the ARCSHS, La Trobe University website which provided them with direct web links to PDFs of useful resources on sexual health, in particular about working with young people and developing and maintaining their youth-friendly practices. A brief description of a number of regional, state and national websites were listed to inform GPs of the range of specialist reproductive, sexual health and counselling services with a focus on young people.

3. GP SURVEY: 'Chlamydia and Sexual Health'

The questionnaire *Chlamydia and Sexual Health* was used to establish a baseline measure of GPs' knowledge and practice before the Chlamydia Campaign was launched. Questionnaires were sent to all GPs in WA using a list provided to DoH WA by Australian Medical Publishing Company (AMPCo). Of the 2038 questionnaires sent, 21 were returned not completed as the GP had resigned or semi-retired, and a further 16 GPs had left the practice or changed address. In all, 576 GPs responded, a response rate of 29%. Twelve questionnaires were returned after the June 30 cut-off date, which meant that answers may have been biased by the health promotion materials sent out by DoH WA on June 22 2006. These 12 were therefore excluded from the following analyses.

In relation to the response rate, it must be remembered that the total population of GPs in WA will include those who have a special interest in geriatrics, sports medicine, and other areas totally unrelated to young people and sexual health. In addition there will be other GPs who remain registered but are not currently employed. Many of these GPs are unlikely to have returned the questionnaire if they were not interested in participating.

The questionnaire included sections on:

A.	Clinical features	10 questions
B.	Investigations	7 questions
C.	Treatment	4 questions
D.	Public health issues	3 questions
E.	Demographic details	10 questions

3.1 DEMOGRAPHIC DETAILS OF GP RESPONDENTS

Gender

Approximately 51% of the 576 respondents were male (285) and approximately 48% were female (269). Gender data were missing for 1% of respondents.

Age Group

Respondents were asked to indicate their age in the age bands below. It can be seen that almost two-thirds of the respondents were aged between 35 and 54 years.

Table 1: Age Group of GP Respondents

Age Group	Number	% of GPs	Female GPs	% of Age Group	Male GPs	% of Age Group
25 to 34	61	10.9	37	62.2	23	37.7
35 to 44	164	29.4	101	61.5	61	37.1
45 to 54	187	33.5	94	50.2	92	49.1
55 to 64	101	18.1	28	27.2	72	71.2
65 and over	44	7.9	8	18.1	35	79.5

Postcodes of Practice

Postcodes of GPs responding to the survey were divided into urban, rural and remote categories using the Rural, Remote and Metropolitan Areas (RRMA) Classification system developed by the Department of Primary Industries and Energy in 1994. This system uses an index of remoteness combined with population size to classify categories. Using this system, it can be seen that most (74%) GPs responding to the questionnaire practiced in urban areas, with 11% in rural and 15% in remote areas.

Table 2: Postcodes of Practice

Postcode	Number	% of GPs
Urban	408	74
Rural	83	15
Remote	58	11

Years Working in General Practice

The working life of the respondents ranged from some months to 58 years. The majority of respondents (78%) had been in general practice for over a decade.

Table 3: Years in Practice

Years in Practice	Number	% of GPs
0- 9	117	21
10-19	194	34
20-29	150	27
30-39	69	12
40-49	21	4
50-59	6	1

ARE THESE RESPONDENTS REPRESENTATIVE OF ALL GPs IN WA?

It is difficult to assess the extent to which GP respondents to this survey were representative of the WA population of GPs as a whole, as so much of the data currently available about GP demographics uses a variety of definitions which makes comparisons difficult. For example, common classifications include 'General Practitioners', 'Vocationally Registered General Practitioners' and 'Primary Medical Care Practitioners'. Australia-wide general practice statistics were compiled in 2000 and 2004 by the Commonwealth Department of Health and Aged Care (General Practice in Australia 2000, 2004). However, these reports offer very limited information at a state level.

General Practice in Australia 2004 estimated that WA had a total of 1849 vocationally registered GPs, who worked an equivalent full-time workload of 1319 GPs. (From the mailing list supplied by AMPCo to DoH WA, surveys were sent to 2038 GPs, so it is not clear what definition of GP was used by AMPCo).

The 2003-4 Division of General Practice Survey, conducted by Primary Health Care Research and Information Services (PHCRIS), recorded 2044 GPs of which 42% were women suggesting that our sample (48%) may have been skewed slightly towards female respondents. (www.phcris.org.au)

The percentage of vocationally registered GPs in age categories Australia-wide are available from General Practice in Australia 2004; however state level data is not available. Comparison of this data with demographics from the current study suggests that the current study is broadly representative of the age groups of GPs Australia wide.

Table 4: Age groups of Australian GPs and of GPs in current study

Age category	GPs in Aust (2004)	Current Study (2005)
< 35 years	14.8%	10.9%
34-44 years	30.7%	29.4%
45-54 years	28.9%	33.5%
55-64 years	14.9%	18.1%
65 years and over	10.7%	7.9%

DEMOGRAPHICS RELATED TO PRACTICE PATIENTS

GPs were asked to estimate the percentage of their practice patients in three categories: young people (15-24 years), males, and those for whom English was not the first language.

Table 5: Demographics of Practice Patients

Percent	15-24 years old	Male	Not speaking English as their first language
<5	3.7	5.5	57.4
5-10	24.5	15.1	23.8
10-25	48.9	22.0	8.9
25-50	16.7	45.9	3.0
50-75	2.3	8.3	2.5
>75	0.4	0.4	1.6

For the majority of GPs less than a quarter of their practice's patients were young people. Most GPs had few patients for whom English was not a first language. In keeping with what is commonly found in primary health care, GPs had more female than male patients.

FREQUENCY OF PARTICULAR PRACTICES

GPs were asked to estimate the frequency with which they provided particular reproductive and sexual health services. It can be seen that the majority (78%) provided contraceptive advice and performed Pap smears at least weekly. Around 70% advised on safe sex practices at least weekly. GPs were more likely to diagnose a patient with an STI or recommend STI testing for risk practices on a monthly basis or infrequently than on a daily or weekly basis.

Table 6: Percentage Frequency of Particular Practices, n=559

	Daily	Weekly	Monthly	Infrequently	Never
Provide contraceptive advice	55.5	33.0	6.2	3.9	0.0
Perform Pap smears	50.7	30.0	10.8	6.0	1.2
Advise on safe sex practices	29.4	42.2	17.6	9.0	0.0
Diagnose a patient with an STI	1.4	19.9	44.3	32.1	0.4
Recommend STI testing to asymptomatic patients from 'at-risk' groups	14.4	31.2	24.5	26.2	2.1

NUMBER OF CASES OF CHLAMYDIA DIAGNOSED IN THE PAST FOUR WEEKS

GPs were asked if and then how many cases of chlamydia they had diagnosed in the week prior to their completion of the questionnaire. A total number of 266 cases had been diagnosed with the following breakdown by location of practice.

Table 7: Number of Chlamydia Cases Diagnosed by Region

Number	Urban	Rural	Remote	Total
1	106	24	10	140
2	59	11	16	86
3	14	1	6	21
4	9	0	3	12
5	3	1	0	4
12	1	0	1	2
20	1	0	0	1
Total	193	37	36	266

Most GPs who had diagnosed a case of chlamydia had diagnosed one or two only. Seventy-four percent of GPs practising in urban areas diagnosed 193/266 cases (72.5%). Two percent of GPs were from remote areas and 23% of GPs practised in rural areas; yet each group diagnosed 36/266 (13.5%) and 37/266 (13.9%) of chlamydia cases in the week prior to completion of the questionnaire.

3.2 RESULTS FROM GP SURVEY: ‘Chlamydia and Sexual Health’

The following section provides results from the questionnaire under each question, in the format and order in which it appeared. A copy of the questionnaire appears in Appendix 1.

A. CLINICAL FEATURES

1. For a patient who you consider may be at risk of acquiring an STI how common is it for you to ask about these behaviours?

Table 8: Percentage of GPs who commonly or very commonly asked patients about these behaviours – all GPs, n = 564

Having safe sex	81.2
Having more than one sex partner	65.4
Having sex with sex workers	29.5
Recent overseas travel	80.5
Injecting drug use	65.4

It can be seen that over 80% of GPs commonly or very commonly asked patients about their safe sex behaviour and recent overseas travel. Fewer asked whether or not they had had more than one sex partner and about their injecting drug use. Less than one-third of GPs commonly or very commonly asked about having sex with sex workers.

Table 9: Percentage of GPs who commonly and very commonly ask about these behaviours by – age group of GP

	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
	n=61	n=164	n=187	n=101	n=44
Having safe sex	85.1	87.1	77.5	78.1	77.2
Multiple sex partners	68.8	73.1	58.8	63.3	68.1
Using sex workers	21.3	23.7	29.4	36.6	47.7
Recent overseas travel	39.3	52.4	54.5	59.4	65.9
Injecting drug use	62.2	68.2	65.7	63.3	63.6

A substantial number of GPs in all age groups reported that they asked their patients about safe sex behaviours. It was also apparent that GPs of all ages commonly asked about injecting drug use. There was greater variation between age categories in relation to asking about having more than one sex partner, having sex with sex workers, and overseas travel.

Young GPs were only half as likely (21.3%) as those GPs of 65 and over (47.7%) to ask if their patients had had sex with sex workers.

Table 10: Percentage of GPs who commonly and very commonly ask about these behaviours - by gender of GP

	Female	Male
	n=268	n=284
Having safe sex	87.3	76.0
Multiple sex partners	70.1	61.6
Using sex workers	23.5	36.2
Recent overseas travel	55.2	53.5
Injecting drug use	67.1	64.0

More female (87%) than male (76%) GPs reported that it was common or very common for them to ask patients about safe sex. There were few differences between male and female GPs in relation to asking patients about having more than one sex partner, recent overseas travel, and injecting drug use; however only 24% of female GPs reported asking about sex with sex workers in comparison with 36% of male GPs. These differences may reflect GPs' lower levels of comfort with patients of the opposite sex.

Table 11: Percentage of GPs who commonly and very commonly ask about these behaviours - by location of GP

	Urban	Rural	Remote
	n=407	n=83	n=58
Having safe sex	82.0	85.5	76.9
Multiple sex partners	66.5	63.9	65.5
Using sex workers	32.1	21.7	29.3
Recent overseas travel	56.5	49.4	51.7
Injecting drug use	66.5	67.5	62.1

Again a substantial proportion (over 75%) of GPs in all locations asked patients about safe sex behaviours; while less than a third of GPs in all locations asked their patients about having sex with sex workers. In contrast nearly two-thirds of GPs in all locations asked their patients about injecting drug use which suggests a greater level of GP comfort about this practice.

2. For the following patient presentations (assume they are regular patients of your practice), how would you rate the likelihood of you taking or updating a sexual history?

As the taking of sexual histories is known to be a sensitive area of general practice, the following vignettes, describing risk behaviours for acquiring an STI, were developed to provide GPs with the opportunity to reflect on and document their practice.

A	A 24 year old woman presents for a routine prescription for the contraceptive pill
B	A 24 year old woman presents for a routine Pap smear test
C	A 45 year old man requests advice re immunisations before a holiday to Bali
D	A 32 year old man has been told to present to you by his girlfriend whose own GP recently diagnosed a vaginal infection
E	A 20 year old man presents for a routine prescription for asthma medication and mentions in passing that he has a new girlfriend

In recording the data for Tables 12-15 an abbreviated version of the vignettes has been used.

Table 12: Percentage of GPs who are likely or very likely to take or update a sexual history – all GPs, n = 563

24 year old woman requires prescription for contraceptive pill	39.2
24 year old woman presents for a Pap smear test	55.1
45 year old man requests travel immunisation advice	34.4
32 year old man whose girlfriend has a vaginal infection	95.6
20 year old man for asthma medication who also has a new girlfriend	28.8

Almost all GPs would be likely or very likely to take a sexual history from a 32 year old man whose girlfriend had a vaginal infection, and just over half would do so from a 24 year old woman presenting for a routine Pap smear. Interestingly, well under half would take a sexual history from a 24 year old presenting for a routine prescription of the contraceptive pill. A third or less would be likely or very likely to take a sexual history from a man requesting immunisation prior to a holiday in Bali or from a 20 year old man presenting for an unrelated issue.

Table 13: Percentage of GPs who are likely or very likely to take or update a sexual history by – age group of GPs

	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
	n=61	n=164	n=187	n=101	n=44
24 year old woman requires prescription for contraceptive pill	50.8	41.4	35.8	35.6	36.3
24 year old woman for Pap smear test	77.0	61.5	50.8	44.5	43.1
45 year old man requests travel immunisation advice	42.6	31.0	31.0	33.6	50.0
32 year old man whose girlfriend has a vaginal infection	98.3	96.3	93.0	94.0	100.0
20 year old man for asthma medication prescription who also has new girlfriend	37.7	27.4	26.2	28.7	31.8

With one exception, GPs in the age range of 25-34 years were more likely than GPs of all other age groups to take or update a sexual history for each of

the suggested patient presentations. All GPs aged 65 and over would take a sexual history from a man with a sexual partner with an STI.

Table 14: Percentage of GPs who are likely or very likely to take or update a sexual history by - gender of GPs

	Female n=268	Male n=284
24 year old woman requires prescription for contraceptive pill	51.8	27.1
24 year old woman for Pap smear test	71.6	39.0
45 year old man requests travel immunisation advice	32.3	34.8
32 year old man whose girlfriend has vaginal infection	97.3	94.0
20 year old man for asthma medication prescription who also has new girlfriend	32.0	25.7

Female GPs were more likely to take or update a sexual history for each of the suggested patient presentations except in the case of the 45 year old man seeking immunisation, where slightly more male GPs (34.8%) than female (32.3%) GPs would take a sexual history. Female GPs were nearly twice as likely as male GPs to take or update a sexual history for a patient having a Pap smear test.

Table 15: Percentage of GPs who are likely or very likely to take or update a sexual history by – location of GP

	Urban (n=406-7)	Rural (n=83)	Remote (n=57-8)
24 year old woman requires prescription for contraceptive pill	39.4	36.1	43.1
24 year old woman for Pap smear test	54.9	50.6	59.7
45 year old man requests travel immunisation advice	33.7	30.1	50.0
32 year old man whose girlfriend has a vaginal infection	95.8	98.8	89.7
20 year old man for asthma medication prescription who also has new girlfriend	28.0	30.1	31.0

Most GPs in all locations indicated they would take or update a sexual history for the male patient with a partner with an STI. GPs in all locations were equally reluctant to take or update a sexual history for the 20 year old male with asthma. More GPs in remote locations would take or update a sexual history for the 45 year old male planning travel to Bali than GPs in urban (33.7%) or rural locations (30.1%).

3. For the same presentations, how embarrassed do you think these patients would feel if you were to take a sexual history?

In the previous question GPs were asked to document their own practice in taking of sexual histories in response to vignettes describing risk behaviours for acquiring an STI. The same vignettes were used in this question with GPs making an assessment about the comfort levels of their patients about having their sexual history taken.

A	A 24 year old woman presents for a routine prescription for the contraceptive pill
B	A 24 year old woman presents for a routine Pap smear test
C	A 45 year old man requests advice re immunisations before a holiday to Bali
D	A 32 year old man has been told to present to you by his girlfriend whose own GP recently diagnosed a vaginal infection
E	A 20 year old man presents for a routine prescription for asthma medication and mentions in passing that he has a new girlfriend

In recording the data for Tables 16-19 an abbreviated version of the vignettes has been used.

Table 16: Percentage of GPs who believed that these patients would be embarrassed or very embarrassed if they were to take a sexual history – all GPs, n = 564

24 year old woman requires prescription for contraceptive pill	27.2
24 year old woman for Pap smear test	20.7
45 year old man requests travel immunisation advice	42.4
32 year old man whose girlfriend has a vaginal infection	18.4
20 year old man for asthma medication prescription who also has new girlfriend	41.7

Sixty-four percent of GPs felt that the young man with a girlfriend with a vaginal infection would be not or not at all embarrassed to give a sexual history. Half (52.3%) of respondents felt that the young woman presenting for the Pap smear and 44% thought the young woman requesting the pill would feel not or not at all embarrassed. Patient embarrassment was thought to be more of a potential concern for the 45 year old man requesting immunisation, and the 20 year old man mentioning a new relationship, with only 32% and 26% of respondents rating these patients as likely to be not or not at all embarrassed to give a sexual history.

Table 17: Percentage of GPs who believed that these patients would be embarrassed or very embarrassed if they were to take a sexual history – by age group of GP

	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
	n=61	n=164	n=187	n=101	n=44
24 year old woman requires prescription for contraceptive pill	21.3	17.0	30.4	34.6	36.3
24 year old woman for Pap smear test	19.6	11.5	22.4	29.7	29.5
45 year old man requests travel immunisation advice	49.1	48.1	43.8	35.6	18.1
32 year old man whose girlfriend has a vaginal infection	18.0	15.8	22.4	17.8	11.3
20 year old man for asthma medication prescription who also has new girlfriend	40.9	42.6	48.6	31.6	27.2

Less than twenty percent of GPs in the 35-44 year age group considered that the 24 year old woman wanting a prescription for contraceptives or a Pap smear test and the 32 year old man would not be embarrassed about having a sexual history taken. This proportion was considerably lower than for GPs in all other age groups. It may be that GPs in the 35-44 year age group feel more confident as they have more experience than GPs in the younger age group, but may also be less conservative about sexual health than GPs in the older age groups.

GPs in all age groups except for those aged 65 and over (18.1%) considered that the 45 year old man planning travel to Bali would be embarrassed to have a sexual history taken.

Table 18: Percentage of GPs who believed that these patients would be embarrassed or very embarrassed if they were to take a sexual history – by gender of GP

	Female n=268	Male n=284
24 year old woman requires prescription for contraceptive pill	14.4	39.4
24 year old woman for Pap smear test	11.1	30.1
45 year old man requests travel immunisation advice	53.1	31.2
32 year old man whose girlfriend has a vaginal infection	23.0	14.3
20 year old man for asthma medication prescription who also has new girlfriend	49.8	33.3

Perhaps, as a measure of their discomfort, it is not surprising that more than three times as many male GPs as female GPs considered that female patients wanting contraceptive prescriptions or to have a Pap smear test would be embarrassed to have a sexual history taken. By contrast more than 50% of the female GPs considered that the 45 year old man travelling to Bali would be embarrassed to have his sexual history taken at this consultation.

Table 19: Percentage of GPs who believed that these patients would be embarrassed or very embarrassed if they were to take a sexual history – by location of GP

	Urban n=408	Rural n=83	Remote n=58
24 year old woman requires prescription for contraceptive pill	29.1	19.3	21.1
24 year old woman for Pap smear test	23.0	16.9	13.8
45 year old man requests travel immunisation advice	41.6	39.8	44.9
32 year old man whose girlfriend has a vaginal infection	16.9	20.4	24.1
20 year old man for asthma medication prescription who also has new girlfriend	40.4	43.4	46.5

Similar numbers of GPs in all locations responded alike when judging the likelihood of patient embarrassment for the vignettes where there might appear to the patient to be least justification for taking a sexual history - the 45 year old man travelling to Bali and the 20 year old man with asthma. Fewer GPs in remote than urban locations considered that a patient requesting contraception or a Pap smear would be embarrassed by having a sexual history taken.

4. Do you consider any of the following to be barriers to your taking a sexual history?

Table 20: Percentage of GPs seeing these issues as a major barrier – all GPs, n = 564

A	An appreciable age difference between you & patient	11.4
B	Male patient	10.7
C	Female patient	8.0
D	Not enough time to take a sexual history	47.7
E	The first consultation with this patient	52.7
F	Fear of uncovering a problem you can't deal with	5.4
G	The presence of a third party in the consultation	75.9
H	Your knowledge of the patient outside the surgery	41.4
I	Issues related to language/culture	58.1

The responses to this question highlighted several degrees of GP discomfort about taking a sexual history when there is:

A. An appreciable age difference between GP and patient.

Around one-quarter of GPs of 25-34 years and 35-44 years saw an appreciable age difference between themselves and the patient as a barrier; however fewer than 10% of the GPs in other age ranges (45-54, 55-64, 65 and over) saw this as a barrier. Similarly, for the vast majority of both male and female GPs an appreciable age difference was not seen as a barrier. Most GPs in both non-urban and urban locations did not see an age difference as a barrier.

B. A male patient

Approximately 20% of female GPs reported a male patient to be a barrier in taking a sexual history.

C. A female patient

Just over 10% of male GPs reported a female patient to be a barrier in taking a sexual history.

D. Not enough time to take a sexual history

Less than half of respondents (47.4%) found that lack of time to take a sexual history was a barrier.

E. A first consultation with this patient

First consultation with the patient acted as a barrier to about half of the GPs (52.6%). This was regardless of the age and gender of the GP.

F. Fear of uncovering a problem you can't deal with

Only 5% of GPs believed that fear of uncovering a problem they could not deal with would act as a barrier to their taking a sexual history.

G. Presence of a third party in a consultation

In contrast, 76% of GPs reported that the presence of a third party was a major barrier to taking a sexual history.

H. Your knowledge of the patient outside the surgery

While 41.4% of GPs saw knowledge of patient outside of surgery as a barrier to taking a sexual history, this was more commonly a barrier for younger GPs. Almost half (49%) of both the 25-34 and 35-44 year age groups saw knowledge of patient outside surgery as a barrier, while this was true for just over a third of older GPs. Surprisingly there was no difference between urban and non-urban GPs on this issue, however, female GPs (47%) saw this as a barrier more than male GPs (35%).

I. Issues related to language and culture

Issues related to language and culture were seen as a barrier by 60% of urban GPs, 48% of rural GPs, and 57% of remote GPs.

Table 21: Percentage of GPs seeing these issues as a major barrier – by age group of GPs

	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
	n=61	n=164	n=187	n=101	n=44
Appreciable doctor patient age difference	22.9	26.8	10.1	3.9	4.5
Male patient	16.3	15.2	10.1	3.9	4.5
Female patient	11.4	6.0	9.0	4.9	11.3
Not enough time to take sexual history	55.7	57.3	47.5	35.6	27.2
First consultation with patient	52.4	53.0	49.1	55.4	63.6
Fear of uncovering problem you can't deal with	3.2	5.4	4.8	4.9	6.8
Presence of third party in the consultation	81.9	78.6	72.7	79.2	65.9
Your knowledge of patient outside surgery	49.1	49.3	35.8	33.6	40.9
Issues related to language and culture	65.5	57.3	58.2	58.4	50.0

Table 22: Percentage of GPs seeing these issues as a major barrier – by gender of GP

	Female	Male
	n=268	n=284
Appreciable doctor patient age difference	9.3	13.3
Male patient	20.5	1.7
Female patient	1.1	14.7
Not enough time to take sexual history	46.6	47.8
First consultation with patient	49.6	55.6
Fear of uncovering problem you can't deal with	4.4	5.6
Presence of third party in the consultation	79.1	73.9
Your knowledge of patient outside surgery	47.7	35.2
Issues related to language and culture	57.8	58.8

Table 23: Percentage of GPs seeing these issues as a major barrier – by location of GP

	Urban	Rural	Remote
	n=405-8	n=83	n=58
Appreciable doctor patient age difference	11.3	8.4	17.2
Male patient	11.3	12.0	8.6
Female patient	8.3	3.6	12.1
Not enough time to take sexual history	48.4	41.5	51.7
First consultation with patient	51.3	59.0	51.7
Fear of uncovering problem you can't deal with	5.4	3.6	5.2
Presence of third party in the consultation	77.8	74.7	68.9
Your knowledge of patient outside surgery	43.2	30.1	46.6
Issues related to language and culture	60.4	48.2	56.9

5. If there is a third party present in the consultation does this act as a barrier to sexual history taking?

Table 24: Percentage of GPs who considered the presence of a third party to be often and very often a barrier to sexual history taking – all GPs, n = 556

Very often	Often	Sometimes	Infrequently	Rarely
45.2	32.6	12.0	5.5	4.5

Examples of a third party who might be present during a consultation when a GP is trying to ask sensitive questions include a partner or spouse, a parent, a child, a friend, or a translator. Table 24 shows that over three-quarters of respondents found the presence of a third party to be often or very often a barrier to the taking of a sexual history. Given that less than 5% of GPs rarely found this to be a barrier, the results suggest that all GPs have had some experience of this situation.

It can be seen from Tables 25-27 that the presence of a third party in the consultation was considered to be a barrier by at least three-quarters of all GPs regardless of their age (Table 25), their gender (Table 26) and location of their practice (Table 27).

Table 25: Percentage of GPs who considered the presence of a third party to be often and very often a barrier to sexual history taking – by age group of GP

25-34 years (n=61)	35-44 years (n=164)	45-54 years (n=186)	55-64years (n=101)	65+years (n=44)
81.9	76.8	76.8	79.2	72.7

Table 26: Percentage of GPs who considered the presence of a third party to be often and very often a barrier to sexual history taking – by gender of GP

Female (n=267)	Male (n=283)
77.9	77.7

Table 27: Percentage of GPs who considered the presence of a third party to be often and very often a barrier to sexual history taking – by location of GP

Urban (n=404)	Rural (n=83)	Remote (n=44)
78.9	73.4	75.8

6. For the following patient presentations (assume they are regular patients of your practice), how would you rate the likelihood of you recommending testing for chlamydia?

Table 28: Percentage of GPs who are likely or very likely to recommend testing for chlamydia – all GPs, n = 559

A 24 year old woman presents for a routine prescription for the contraceptive pill	25.8
A 24 year old woman presents for a routine Pap smear test	50.1
A 45 year old man requests advice re immunisations before a holiday to Bali	9.5
A 32 year old man has been told to present to you by his girlfriend whose own GP recently diagnosed a vaginal infection	95.3
A 20 year old man presents for a routine prescription for asthma medication and mentions in passing that he has a new girlfriend	22.7

Where there was a clear rationale for recommending chlamydia testing as in the scenario where the young man presents as the sexual partner of a young woman with a vaginal infection, the vast majority of GPs would be likely to do so. Interestingly the other presentations which also offered a reason for suggesting chlamydia testing were not viewed in this way by all GPs. Only half suggested they might recommend chlamydia testing along with a Pap smear and a quarter suggested chlamydia testing for a woman seeking contraception.

Table 29: Percentage of GPs who are likely or very likely to recommend testing for chlamydia – by age group of GP

	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
	n=61	n=164	n=187	n=101	n=44
24 year old woman requires prescription for contraceptive pill	29.5	29.8	24.0	24.7	9.0
24 year old woman for Pap smear test	67.2	58.5	46.5	38.6	31.8
45 year old man requests travel immunisation advice	11.4	6.7	9.0	10.8	13.6
32 year old man whose girlfriend has vaginal infection	98.3	95.7	93.5	94.0	88.6
20 year old man for asthma medication prescription who also has new girlfriend	24.5	21.9	22.9	19.8	22.7

GPs in all age groups were most likely to recommend testing for chlamydia in keeping with the results described above. Few GPs in all age groups were less likely to recommend testing for chlamydia for the 45 year old man requesting travel advice. In all age groups GPs were overwhelmingly likely or very likely to recommend testing for chlamydia for the 32 year old man whose girlfriend had a recently diagnosed vaginal infection.

Table 30: Percentage of GPs who are likely or very likely to recommend testing for chlamydia – by gender of GP

	Female	Male
	n=268	n=284
24 year old woman requires prescription for contraceptive pill	36.9	14.4
24 year old woman for Pap smear test	70.1	30.3
45 year old man requests travel immunisation advice	8.5	10.5
32 year old man whose girlfriend has vaginal infection	95.8	93.3
20 year old man for asthma medication prescription who also has new girlfriend	23.8	20.7

Not surprisingly there were some gender differences in recommending chlamydia screening for women. Only 14% of male GPs were likely or very likely to recommend chlamydia testing for a 24 year old woman presenting for a routine prescription for the contraceptive pill compared to 37% of female GPs. For a 24 year old woman presenting for a routine Pap smear test 30% of male GPs were likely or very likely to recommend chlamydia testing compared to 71% of female GPs. These differences presumably reflect levels of GP comfort with patients of the opposite sex.

Table 31: Percentage of GPs who are likely or very likely to take or update a sexual history – by location of GP

	Urban	Rural	Remote
	n=400-7	n=81-3	n=58
24 year old woman requires prescription for contraceptive pill	26.5	16.9	25.9
24 year old woman for Pap smear test	49.8	39.8	58.6
45 year old man requests travel immunisation advice	8.2	13.3	13.8
32 year old man whose girlfriend has vaginal infection	95.8	92.8	94.8
20 year old man for asthma medication prescription who also has new girlfriend	21.0	29.6	22.4

The results of GPs in all locations generally reflected greater comfort with recommending testing where there was a rationale which would be obvious to the patient. The greatest variation was apparent where a woman requested a Pap smear, with about 59% of remote GPs stating they would recommend chlamydia testing, in comparison to less than 50% of urban and less than 40% of rural GPs. This may be due to recognition of high rates of STIs amongst Indigenous Australians residing in remote communities.

7. What in your opinion are the main age groups in which genital chlamydia is seen?

Table 32: Percentage of GPs identifying the following age groups as main age groups in which genital chlamydia is seen – all GPs, n = 560

15-19 yrs	44.7
20-24 yrs	76.4
25-29 yrs	29.1
30-34 yrs	4.4
35-39 yrs	1.6
No particular age	0.2

The Chlamydia Campaign targeted the 15-25 year old age group, as both current national and state data show this group has the highest rates of infection. As chlamydia is often asymptomatic (60% of infected women and 25% of infected men) it is crucial that more people in this age group are tested particularly if there are other associated risk factors such as recent change of sexual partners, no use of condoms and multiple sexual partners.

It is therefore of concern that almost half of all GPs (as well as around half of the male and female GPs, and half of the GPs in all locations and in all age groups) did not identify the 15-19 age group as one of the main groups in which chlamydia is seen.

Table 33: Percentage of GPs identifying the following age groups as main age groups in which genital chlamydia is seen - by age group of GP

Age range	25-34 years n=61	35-44 years n=164	45-54 years n=187	55-64 years n=101	65+ years n=44
15-19	41.0	45.7	46.0	45.5	38.6
20-24	88.5	77.4	81.3	68.3	59.1
25-29	34.4	26.2	29.4	30.7	27.3
30-34	0.0	3.7	4.8	5.0	9.1
35-39	0.0	0.6	2.1	2.0	2.3
No particular age	6.6	10.4	12.8	16.8	31.8

The majority of GPs in all age groups, although only two-thirds of GPs aged 65 and over compared to over 85% of GPs of 25-34 years, identified the 20-24 year old age group as at-risk. Less than half of GPs in these age groups (25-34, 35-44, 45-54, 55-64) identified 15-19 years as an at-risk age group with fewest GPs aged 65 and over identifying 15-19 years as an at-risk age group.

Table 34: Percentage of GPs identifying the following age groups as main age groups in which genital chlamydia is seen - by gender of GP

Age range	Female n=269	Male n=284
15-19	52.0	36.8
20-24	82.2	70.9
25-29	32.3	26.3
30-34	4.8	4.2
35-39	0.7	2.5
No particular age	9.7	17.9

More female GPs than male GPs correctly identified the 15-19 and 20-24 age groups as those in which chlamydia is seen.

Table 35: Percentage of GPs identifying the following age groups as main age groups in which genital chlamydia is seen - by location of GP

Age range in which chlamydia is seen	Urban	Rural	Remote
	n=407	n=83	n=58
15-19	43.7	56.6	36.2
20-24	76.1	79.5	74.1
25-29	29.2	31.5	24.1
30-34	5.1	2.4	3.4
35-39	1.7	1.2	1.7
No particular age	13.5	9.6	22.4

About three-quarters of GPs in all locations identified 20-24 year olds as an at-risk group; however less than half the GPs in urban and remote practices identified 15-19 years olds as an at-risk group. DoH WA may need to focus awareness raising activities in order to build on the impetus of its current campaign.

8. In symptomatic patients, which are the most common modes of presentation for chlamydia?

Table 36: Percentage of GPs identifying the following as the most common mode of presentation for chlamydia in symptomatic patients – all GPs n = 563

Female Patients	All GPs n=557	Male Patients	All GPs n=561
Pain or burning on urination	71.1	Pain or burning on urination	88.5
Vaginal discharge	76.0	Urethral discharge	84.0
Genital ulcer or lump	7.3	Genital ulcer or lump	6.0
Abdominal or pelvic pain	68.4	Abdominal pain	7.4
Jaundice or abnormal LFTs	2.8	Jaundice or abnormal LFTs	0.7

Over two-thirds of GPs knew the most common modes of presentation for chlamydia in female patients. Almost 90% of GPs knew the most common modes of presentation of chlamydia in male patients, however slightly more GPs believed that pain or burning on urination rather than urethral discharge was most common.

Table 37: Percentage of GPs identifying the following as the most common mode of presentation for chlamydia in symptomatic patients - by age group of GP

Female patients	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
	n=61	n=164	n=187	n=101	n=44
Pain or burning on urination	72.1	75.6	67.4	71.3	70.5
Vaginal discharge	77.0	76.8	75.9	77.2	72.7
Genital ulcer or lump	6.6	7.3	4.8	8.9	13.6
Abdominal or pelvic pain	63.9	74.4	65.8	71.3	59.1
Jaundice or abnormal LFTs	3.3	1.2	3.2	2.0	6.8

Male patients	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
	n=61	n=164	n=187	n=101	n=44
Pain or burning on urination	90.2	92.7	88.8	86.1	79.5
Urethral discharge	80.3	86.0	84.0	89.1	81.8
Genital ulcer or lump	4.9	7.3	3.7	5.9	11.4
Abdominal pain	6.6	9.8	6.4	7.9	4.5
Jaundice or abnormal LFTs	0.0	0.6	0.5	2.0	0.0

Over 70% of GPs in all age groups correctly identified vaginal discharge and pain on urination as common female modes of presentation of chlamydia. Fewer GPs identified abdominal or pelvic pain as the other most common mode of presentation.

Over 85% of GPs in all age groups, with the exception of GPs aged 65 and over, identified pain or burning on urination as common modes of male presentation of chlamydia. Interestingly urethral discharge is, in fact, the most common mode of presentation. Over 84% of all GPs of all age groups also recognised this as a common presentation.

Table 38: Percentage of GPs identifying the following as the most common mode of presentation for chlamydia in symptomatic patients - by gender of GP

Female patient	Female GP	Male GP	Male patient	Female GP	Male GP
	n=266	n=283		n=266	n=283
Pain or burning on urination	72.9	69.8	Pain or burning on urination	92.6	84.6
Vaginal discharge	78.1	75.4	Urethral discharge	82.5	87.0
Genital ulcer or lump	6.3	8.1	Genital ulcer or lump	4.5	7.7
Abdominal or pelvic pain	72.9	64.6	Abdominal pain	8.6	6.7
Jaundice or abnormal LFTs	1.9	3.5	Jaundice or abnormal LFTs	0.0	1.4

More than three-quarters of female and male GPs identified vaginal discharge as one of the most common modes of presentation for chlamydia in female patients. More female GPs (72.9%) than male GPs (64.6%) also identified abdominal or pelvic pain as the other common mode of presentation.

Slightly more male GPs (87%) than female GPs (82.5%) identified urethral discharge as the most common mode of presentation for chlamydia in male patients.

Table 39: Percentage of GPs identifying the following as the most common mode of presentation for chlamydia in symptomatic patients - by location of GP

Female Patients	Urban	Rural	Remote	Male Patients	Urban	Rural	Remote
	n=403	n=83	n=58		n=403	n=83	n=58
Pain or burning on urination	74.8	66.3	58.6	Pain or burning on urination	90.2	85.5	81.0
Vaginal discharge	77.7	78.3	65.5	Urethral discharge	86.3	81.9	82.8
Genital ulcer or lump	7.6	6.0	6.9	Genital ulcer or lump	6.6	4.8	5.2
Abdominal or pelvic pain	67.6	69.9	74.1	Abdominal pain	7.8	7.2	6.9
Jaundice or abnormal LFTs	2.5	3.6	3.4	Jaundice/ abnormal LFTs	0.7	1.2	0.0

More than three-quarters of GPs in urban and rural locations identified vaginal discharge as one of the most common modes of presentation for chlamydia in female patients, while only 65.5% of GPs in remote locations did so. But interestingly more GPs in remote locations (74.1%) than in urban (67.6%) and rural (69.9%) locations identified abdominal or pelvic pain as another common mode of presentation.

The majority of GPs in all locations correctly identified pain on urination and urethral discharge as the most common mode of presentation for chlamydia in male patients.

9. For a patient who presents with symptoms of chlamydia or another STI(s), how common is it for you to ask about these behaviours?

Table 40: Percentage of GPs who very commonly or commonly ask about these behaviours for a patient who presents with STI symptoms – all GPs, n = 561

Specific sexual practices e.g. vaginal, oral and anal sex, insertive and receptive sex	55.4
Number, names and details of sex partners for contact tracing purposes	37.3
Having sex with sex workers	41.2
Recent overseas travel	67.0
Injecting drug use	64.5
A previous history of STIs	87.0

The majority of GPs commonly asked a patient presenting with symptoms of an STI about their previous history of STIs. Recent overseas travel and injecting drug use were asked by around two-thirds of GPs. Interestingly only half of GPs would commonly ask questions about specific sexual practices which might assist in diagnosis.

Table 41: Percentage of GPs who very commonly or commonly ask about these behaviours for a patient who presents with STI symptoms - by age group of GP

	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
	n=61	n=164	n=187	n=99	n=44
Specific sexual practices	57.3	48.7	55.0	62.6	59.0
Details of sex partners for contact tracing	40.9	34.7	36.8	37.3	47.7
Sex with sex workers	27.8	34.7	45.9	45.4	52.2
Recent overseas travel	52.4	57.9	69.5	78.7	81.8
Injecting drug use	60.6	60.9	65.2	66.6	72.7
Previous history of STIs	90.1	85.9	82.8	90.9	90.9

Around 60 % GPs in the 55-64 and 65 and over age groups recorded that it was common for them to ask about specific sexual practices in contrast to less than half of 35-44 year old GPs.

The vast majority of GPs in all age groups commonly asked patients about any previous history of STIs.

Surprisingly GPs aged 65 and over more commonly asked about injecting drug use (72.7%) than GPs in the 25-34 age group where only 60.6% would do so. GPs aged 65 and over also reported a higher rate (52.2%) of asking about recent overseas travel, almost twice the number of GPs in the 25-34 years age group (27.8%) who would do so.

It was more common for GPs of 65 and over to ask their patients about having sex with sex workers (52%) than GPs in the 25-34 years age group (28%).

Table 42: Percentage of GPs who very commonly or commonly ask about these behaviours for a patient who presents with STI symptoms - by gender of GP

	Female	Male
	n=268	n=284
Specific sexual practices	51.1	58.4
Details of sex partners for contact tracing	40.2	35.2
Sex with sex workers	33.2	48.5
Recent overseas travel	62.6	70.7
Injecting drug use	63.4	64.7
Previous history of STIs	85.4	87.6

Similar numbers of male and female GPs commonly asked about all of the described behaviours. The biggest difference was in relation to asking about sex with sex workers, with nearly half the male GPs (48.5%) asking about this behaviour compared to only a third (33.2%) of female GPs.

Table 43: Percentage of GPs who very commonly or commonly ask about these behaviours for a patient who presents with STI symptoms - by location of GP

	Urban	Rural	Remote
	n=404-5	n=83	n=58
Specific sexual practices	54.2	54.2	53.4
Details of sex partners for contact tracing	32.5	32.5	48.3
Sex with sex workers	38.5	38.6	39.7
Recent overseas travel	62.1	62.2	70.7
Injecting drug use	63.8	63.9	62.1
Previous history of STIs	91.5	91.6	91.4

There were no marked differences between GPs in the different locations in relation to questions commonly asked of patients with symptoms of an STI. A high percentage of GPs in all locations would commonly ask their patients about previous history of STIs. Fewer GPs in all locations reported very commonly or commonly asking patients about having sex with sex workers.

10. For a patient in whom you have diagnosed a laboratory-confirmed STI, how common is it for you to ask about these behaviours?

Table 44: Percentage of GPs commonly or very commonly asking about behaviours in patients in whom they have diagnosed a lab confirmed STI – all GPs, n =561

Specific sexual practices e.g. vaginal, oral and anal sex, insertive and receptive sex	63.7
Number, names and details of sex partners for contact tracing purposes	60.6
Having sex with sex workers	53.5
Recent overseas travel	72.7
Injecting drug use	71.8
A previous history of STIs	89.8

As for the previous question, most GPs commonly asked about previous history of STIs for patients in whom they had diagnosed a laboratory-confirmed STI. Details of recent overseas travel and injecting drug use were commonly asked by over two-thirds of GPs.

Information on these three behaviours was most commonly sought by GPs of all ages, both genders and in all locations.

Table 45: Percentage of GPs commonly or very commonly asking about behaviours in patients in whom they have diagnosed a lab confirmed STI - by age group of GP

	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
	n=61	n=163	n=185	n=98	n=43
Specific sexual practices	81.9	61.3	64.8	60.2	69.7
Details of sex partners for contact tracing	73.7	59.5	58.9	58.1	60.4
Sex with sex workers	47.5	46.6	55.6	62.2	67.4
Recent overseas travel	70.4	64.4	75.1	79.5	83.7
Injecting drug use	67.2	69.3	72.9	75.5	79.0
Previous history of STIs	91.8	91.4	85.4	95.9	90.6

Fewer GPs of all ages, in all locations and of both genders very commonly or commonly asked patients about having sex with sex workers. It was more common for GPs of over 65 years to ask their patients about having sex with sex workers (67%) than GPs in the 25-34 age group (48%).

Table 46: Percentage of GPs commonly or very commonly asking about behaviours in patients in whom they have diagnosed a lab confirmed STI - by gender of GP

	Female	Male
	n=268	n=284
Specific sexual practices	60.4	65.4
Details of sex partners for contact tracing	64.5	55.9
Sex with sex workers	45.5	62.1
Recent overseas travel	67.9	76.4
Injecting drug use	70.1	72.5
Previous history of STIs	88.0	90.4

Equal numbers of male and female GPs responded alike to this question. The exception was the response to asking about sex with a sex worker where 62.1% of male GPs said they would commonly ask that question, compared to only 45.5% of female GPs.

Table 47: Percentage of GPs commonly or very commonly asking about behaviours in patients in whom they have diagnosed a lab confirmed STI - by location of GP

	Urban	Rural	Remote
	n=402-5*	n=83	n=58
Specific sexual practices	63.9	57.8	70.7
Details of sex partners for contact tracing	60.9	55.4	67.2
Sex with sex workers	54.3	53.0	56.9
Recent overseas travel	74.0	72.2	69.0
Injecting drug use	73.8	67.5	67.2
Previous history of STIs	90.1	90.4	89.7

**405 urban GPs responded to most parts of this question; the other parts were answered by only 402 GPs.*

Nearly all GPs in all locations would commonly ask their patients about previous history of STIs but only just over half of the GPs in all locations would commonly ask patients about having sex with a sex worker.

11. Presumptive treatment for STIs involves treatment without first confirming the presence of infection by laboratory diagnosis. How often would you treat presumptively for a patient you suspected had chlamydia?

Table 48: Percentage of GPs who would treat presumptively a patient they suspected had chlamydia – all GPs, n = 554

Always	22.0
Mostly	24.0
Sometimes	33.7
Never	20.1

The Silver Book (*Guidelines for Managing STIs: A Guide for Primary Health Care Workers*) supports the presumptive treatment of chlamydia in patients being treated for gonorrhoea, especially in highly endemic areas (p. 70).

Given that presumptive treatment is usually offered to patients whom GPs believe will not return for test results (e.g. homeless, young people, Indigenous) it is interesting to note the relatively high numbers of GPs offering presumptive treatment .

Table 49: Percentage of GPs who would treat presumptively a patient they suspected had chlamydia - by age group of GP

	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
	n=60	n=162	n=186	n=101	n=43
Always	39.3	21.3	22.9	17.8	4.5
Mostly	16.3	20.1	26.7	30.6	20.4
Sometimes	33.5	39.0	33.3	26.7	31.8
Never	9.8	18.2	17.1	25.0	40.9

Nearly forty percent of young GPs would always treat presumptively compared to only 4.5 % of GPs aged 65 and over. About 20% of GPs in the other age groups would always treat presumptively. Overall around half of GPs in the age groups would always or mostly presumptively treat a patient who they suspected had chlamydia, with the exception of GPs aged 65 and over, of whom only a quarter would mostly do so.

Table 50: Percentage of GPs who would treat presumptively a patient they suspected had chlamydia - by gender of GP

	Female	Male
	n=266	n=283
Always	20.5	24.0
Mostly	22.0	25.4
Sometimes	35.0	31.4
Never	21.8	18.7

Just under half of GPs of both genders would always and mostly presumptively treat for chlamydia.

Table 51: Percentage of GPs who would treat presumptively a patient they suspected had chlamydia - by location of GP

	Urban	Rural	Remote
	n=403	n=83	n=58
Always	18.8	16.9	43.1
Mostly	24.8	25.3	20.7
Sometimes	34.2	38.6	22.4
Never	21.8	19.3	13.8

About two-thirds of GPs practising in remote locations would always and mostly presumptively treat for chlamydia in contrast to less than half of GPs in urban and rural locations. This is likely to reflect the wide promotion of presumptive treatment for STIs in remote Indigenous communities.

12. When you treat presumptively, do you perform confirmatory laboratory tests at the same time?

While presumptive treatment for STIs is recommended under certain circumstances, it is also important that confirmatory tests be carried out. The purpose of this is both to ensure that the patient has been correctly treated, and also to ensure that the case is notified and therefore contributes to the population health statistics.

Those GPs who answered that they never treated presumptively were not required to complete this question. Tables 52- 55 therefore represent results from a smaller pool of around 429 GPs.

Table 52: Percentage of GPs who would perform confirmatory lab tests at the same time as treating presumptively – all GPs, n = 429

Always	88.7
Mostly	9.0
Sometimes	2.1
Never	0.2

Table 52 shows that almost 90% of GPs who treated presumptively performed confirmatory tests at the same time, while the remainder mostly did so. Only a very few GPs never performed confirmatory tests.

Table 53: Percentage of GPs who would perform confirmatory lab tests at the same time as treating presumptively - by age group of GP

	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
	n=54	n=129	n=146	n=74	n=25
Always	96.2	89.1	88.3	90.5	68.0
Mostly	1.8	7.7	10.9	8.1	29.2
Sometimes	0.0	3.1	0.6	1.3	12.0
Never	1.8	0.0	0.0	0.0	0.0

GPs in all age groups reported very high levels of always performing confirmatory laboratory tests at the same time as presumptive treatment. The only exception to this was GPs in the 65 and over age group, of whom only just over two-thirds would always do so.

Table 54: Percentage of GPs who would perform confirmatory lab tests at the same time as treating presumptively - by gender of GP

	Female	Male
	n=202	n=222
Always	90.5	86.9
Mostly	6.4	11.2
Sometimes	2.4	1.8
Never	0.4	0.0

Once again very high numbers of both female and male GPs would always perform confirmatory laboratory tests when treating presumptively.

Table 55: Percentage of GPs who would perform confirmatory lab tests at the same time as treating presumptively - by location of GP

	Urban	Rural	Remote
	n=303	n=67	n=49
Always	90.7	83.6	83.7
Mostly	6.2	16.4	14.3
Sometimes	2.6	0.0	2.0
Never	0.3	0.0	0.0

Slightly more GPs in urban locations (90.7%) than GPs in remote (83.7%) and rural (83.6%) locations would always perform confirmatory laboratory tests when treating presumptively.

13. If you treat presumptively without performing confirmatory laboratory tests, what are the main reasons for doing so?

As was seen in the preceding Tables (52-55), very few GPs treated presumptively without performing confirmatory tests. GPs who always or mostly performed confirmatory tests at the same time as offering presumptive treatment were not required to answer Question 13. The results in Tables 56-59 therefore represent the views of only 9 GPs.

Table 56: Percentage of GPs offering as reasons for treating presumptively without performing confirmatory tests – all GPs, n = 28

		Number
Concerns about reliability of diagnostic test	1.5	9
Patients don't like being tested	0.8	5
History of risk behaviour, e.g. unprotected sex	1.7	10
Recurrence of previously diagnosed infection, therefore no need to re-test	0.5	3
Patients cannot afford to pay for laboratory tests	0.7	4
Pressure from the Health Insurance Commission (HIC) to minimise pathology testing	0.3	2
Concerns about confidentiality of notification procedures if test result positive	0.9	5
Other reason (please specify)	2.5	14

It can be seen that concerns about test reliability and the patient's history of unprotected sex were the reasons most frequently nominated for offering presumptive treatment without performing confirmatory tests, by the handful of GPs who did so. In Tables 57 to 59 in each category the actual numbers of GPs responding to the question are in brackets after the percentages.

Table 57: Percentage (number) of GPs offering as reasons for treating presumptively without performing confirmatory laboratory tests - by age group of GP

	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
Concerns about reliability of test (n=9)	11.1(1)	22.2(2)	33.3(3)	22.2(2)	11.1(1)
Patients don't like being tested (n=5)	0.0	20.0(1)	0.0	20.0(1)	60.0(3)
History of risk behaviour (n=10)	20.0(2)	20.0(2)	30.0(3)	20.0(2)	10.0(1)
Recurrence of previously diagnosed infection (n=3)	33.3(1)	0	33.3(1)	33.3(1)	0.0
Patients cannot afford laboratory tests (n=4)	0.0	25.0(1)	0.0	50.0(2)	25.0(1)
Pressure from HIC to minimise pathology testing (n=2)	0.0	0.0	0.0	50.0(1)	50.0(1)
Concerns about confidentiality (n=5)	0.0	20.0(1)	20.0(1)	20.0(1)	40.0(2)
Other reason (n=14)	42.8(6)	35.7(5)	14.2(2)	0.0	7.1(1)

While the practice of treating presumptively without performing confirmatory tests was uncommon across all age groups, older GPs (especially those over 65 and over years) were more likely to do so. The reasons they most frequently offered was patients' dislike of such tests, and concerns about confidentiality.

Table 58: Percentage (number) of GPs offering as reasons for treating presumptively without performing confirmatory laboratory tests - by gender of GP

	Female	Male
Concerns about reliability of test (n=9)	66.6(6)	33.3(3)
Patients don't like being tested (n=5)	20.0(1)	80.0(4)
History of risk behaviour (n=10)	40.0(4)	60.0(6)
Recurrence of previously diagnosed infection (n=3)	33.3(1)	66.6(2)
Patients cannot afford laboratory tests (n=4)	25.0(1)	5.0(3)
Pressure from HIC to minimise pathology testing (n=2)	0.0	100.0(2)
Concerns about confidentiality (n=5)	40.0(2)	60.0(3)
Other reason (n=14)	71.4(10)	28.5(4)

Twice as many female than male GPs offered concerns about test reliability as a reason for treating presumptively without performing confirmatory laboratory tests. It must be remembered that the numbers of GPs responding to this question was very small.

Table 59: Percentage (number) of GPs offering as reasons for treating presumptively without performing confirmatory laboratory tests - by location of GP

	Urban	Rural	Remote
Concerns about reliability of test (n=9)	66.6(6)	22.2(2)	11.1(1)
Patients don't like being tested (n=5)	60.0(3)	20.0(1)	20.0(1)
History of risk behaviour (n=10)	80.0(8)	20.0(2)	0.0
Recurrence of previously diagnosed infection (n=3)	33.3(1)	66.6(2)	0.0
Patients cannot afford laboratory tests (n=4)	75.0(3)	0.0	25.0(1)
Pressure from HIC to minimise pathology testing (n=2)	50.0(1)	0.0	50.0(1)
Concerns about confidentiality (n=5)	20.0(1)	60.0(3)	20.0(1)
Other reason (n=13)	46.1(6)	35.7(5)	15.3(2)

More urban GPs than remote or rural GPs offered reasons for treating presumptively without performing confirmatory laboratory tests. Once again a common reason offered was concerns in relation to test reliability, although several GPs also gave as a reason the patient's history of risk behaviour.

A number of GPs selected 'other reason' as a reason for treating presumptively without performing confirmatory laboratory tests. These reasons included:

- Patient refusal
- Patient cannot return for follow-up appointment
- Remote Indigenous community
- Suspected pelvic inflammatory disease
- Would delay diagnosis and treatment for infertility.

14. What are the two most common reasons for recommending testing for genital chlamydia to asymptomatic patients in your practice?

Table 60: Percentages of GPs offering the following reasons for recommending testing for genital chlamydia to asymptomatic patients in their practice – all GPs, n = 487

	n=564
Patient in high risk age group	16.3
Recent partner change or >1 partner in past 12 months	13.8
History of risk behaviour, e.g. unprotected sex	30.1
Clinical opportunity, e.g. patient undergoing routine Pap smear	25.5
Patient referred because of sexual partner diagnosed with STI	36.0
Patient self-presented for STI check because sexual partner diagnosed with STI	47.5
Other reason	3.5

As all GPs were invited to offer two responses to this question, in Tables 61-63 both percentages and number of GPs responding in this category have been reported. The total number of GPs responding to each alternative is shown in brackets in the column describing patient behaviour.

Almost half of the GP respondents agreed that a common reason for offering testing for genital chlamydia to asymptomatic patients was because their sexual partners had had an STI diagnosis. Over a third of GPs agreed that patients presenting because of a partner's STI was also a common reason for recommending chlamydia testing to an asymptomatic patient. GPs were least likely to recommend testing for genital chlamydia to those asymptomatic patients with a history of recent partner change, more than one partner in the previous 12 months or who were in a high risk age group.

Table 61: Percentage (number) of GPs offering the following reasons for recommending testing for genital chlamydia to asymptomatic patients in their practice – by age group of GPs

	n=	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
Patient in high risk age group	92	10.8(10)	27.1(25)	48.7(38)	19.2(15)	5.1(4)
Recent partner change or >1 partner in past 12 months	78	6.4(5)	28.2(22)	41.0(32)	16.6(13)	7.6(6)
History of risk behaviour, e.g. unprotected sex	170	14.1(24)	34.1(58)	30.5(52)	14.1(24)	7.0(12)
Clinical opportunity, e.g. patient undergoing routine Pap smear	144	13.1(19)	34.0(49)	36.1(52)	13.8(20)	2.7(4)
Patient referred because of sexual partner diagnosed with STI	207	10.5(22)	23.5(49)	33.1(69)	21.2(44)	11.1(23)
Patient self-presented for STI check because sexual partner diagnosed with STI	267	9.7(26)	29.4(79)	31.7(85)	20.1(54)	8.5(23)
Other reason	20	20.0(4)	25.0(5)	30.0(6)	20.0(4)	5.0(1)

Tables 61 shows that over a third of GPs in the 35-44 year age group most commonly chose to recommend testing for chlamydia to an asymptomatic patient because of a patient's history of risk taking or because there was a clinical opportunity to do so.

Older GPs (54-55 and 65 and over) were more likely to recommend testing because the patient's partner had an STI and the patient was either referred by another doctor or else self-presented.

Table 62: Percentage (number) of GPs offering the following reasons for recommending testing for genital chlamydia to asymptomatic patients in their practice – by gender of GPs

	Female	Male
Patient in high risk age group (n=89)	53.9(48)	46.0(41)
Recent partner change or >1 partner in past 12 months (n=78)	58.9(46)	41.0(32)
History of risk behaviour, e.g. unprotected sex (n=169)	48.5(82)	51.4(87)
Clinical opportunity, e.g. patient undergoing routine Pap smear (n=142)	77.4(110)	22.5(32)
Patient referred because of sexual partner diagnosed with STI (n=206)	36.4(75)	63.5(131)
Patient self-presented for STI check because sexual partner diagnosed with STI (n=268)	39.1(105)	60.8(163)
Other reason (n=20)	50.0(10)	50.0(10)

Table 62 shows there were some gender differences in reasons for recommending chlamydia testing for asymptomatic patients. While male GPs were most likely to suggest chlamydia testing where there was a rationale that was clear to the patient, as outlined in Tables 60 and 61, female GPs were almost three times as likely as their male colleagues to use a clinical opportunity, such as a routine Pap smear, to suggest chlamydia testing.

Table 63: Percentage (number) of GPs offering the following reasons for recommending testing for genital chlamydia to asymptomatic patients in their practice – by location of GPs

	Urban	Rural	Remote
Patient in high risk age group (n=90)	72.2(65)	15.2(14)	11.9(11)
Recent partner change or >1 partner in past 12 months (n=77)	76.9(60)	12.8(10)	8.9(7)
History of risk behaviour, e.g. unprotected sex (n=168)	73.2(123)	15.4(26)	11.3(19)
Clinical opportunity, e.g. patient undergoing routine Pap smear (n=139)	72.6(101)	15.1(21)	12.2(17)
Patient referred because of sexual partner diagnosed with STI (n=207)	74.8(155)	15.9(33)	9.1(19)
Patient self-presented for STI check because sexual partner diagnosed with STI (n=266)	72.5(193)	18.0(48)	9.3(25)
Other reason (n=19)	52.6(10)	25.0(5)	21.0(4)

Table 63 shows some interesting differences in GPs' practices by location, with almost three-quarters of urban GPs selecting each reason for recommending chlamydia testing to asymptomatic patients. This contrasts with the very much lower frequencies of rural and remote GPs who would do so.

A number of GPs selected 'other' reasons for recommending chlamydia testing to an asymptomatic patient. These included reasons such as:

- Pre-insertion of intrauterine device or termination of pregnancy
- Before commencing a relationship with a new partner
- Patient anxiety following publicity
- Pelvic pain, infertility
- Sex worker.

15. Which tests would you use to test an asymptomatic patient for chlamydia? (please tick one or more items in each case)

Table 64: Percentage of GPs selecting test to test asymptomatic FEMALE patient with chlamydia – all GPs, n = 560

Female Patients	
First void urine for nucleic acid testing, e.g. PCR	91.0
Mid-stream urine for nucleic acid testing, e.g. PCR	4.6
Mid-stream urine for microscopy and culture	6.4
Self-obtained lower vaginal swab for nucleic acid testing, e.g. PCR	6.7
Practitioner obtained lower vaginal swab for nucleic acid testing e.g. PCR	7.3
Practitioner-obtained endo-cervical swab for nucleic acid testing, e.g. PCR	68.3
Practitioner-obtained endo-cervical swab for microscopy and culture	17.9
Blood test for chlamydia	2.1
Other (please specify)	1.4

First void urine for PCR was the test of choice for over 90% of respondents. Over two-thirds of GPs would use a practitioner obtained endo-cervical swab for PCR.

Table 65: Percentage of GPs selecting test to test asymptomatic FEMALE patient for chlamydia - by age group of GP

Female Patients	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
	n=61	n=164	n=187	n=101	n=44
First void urine for nucleic acid testing	90.2	89.0	94.7	90.15	90.9
Mid-stream urine for nucleic acid testing	1.6	4.3	2.7	5.9	15.9
Mid-stream urine for microscopy and culture	1.6	3.0	3.7	14.9	18.2
Self-obtained lower vaginal swab for nucleic acid testing	9.8	6.1	6.4	7.9	4.5
Practitioner-obtained lower vaginal swab for nucleic acid testing	4.9	5.5	5.3	8.9	22.7
Practitioner-obtained endo-cervical swab for nucleic acid testing	73.8	77.4	71.7	57.4	38.6
Practitioner-obtained endo-cervical swab for microscopy and culture	16.4	11.0	17.1	29.7	20.5
Blood test for chlamydia	0.0	1.2	1.1	4.0	15.9
Other (please specify)	1.6	1.8	1.1	0.0	0.0

A very high percentage of GPs in all age groups would use first void urine for nucleic acid testing to test for chlamydia in an asymptomatic patient. Over 70 % of GPs, with the exception of GPs aged 55-64 (57.4%) and 65 and over (38.6%) would use practitioner-obtained endo-cervical swab for nucleic acid testing for an asymptomatic patient.

Over 20% of GPs aged 65 and over (four times as many as GPs in the age group of 25-34) indicated they would use practitioner-obtained lower vaginal swab for nucleic acid testing for an asymptomatic patient.

Table 66: Percentage of GPs selecting test to test asymptomatic FEMALE patient for chlamydia - by gender of GP

Female Patients	Female	Male
	n=269	n=284
First void urine for nucleic acid testing	90.2	89.0
Mid-stream urine for nucleic acid testing	1.6	4.3
Mid-stream urine for microscopy and culture	1.6	3.0
Self-obtained lower vaginal swab for nucleic acid testing	9.8	6.1
Practitioner-obtained lower vaginal swab for nucleic acid testing	4.9	5.5
Practitioner-obtained endo-cervical swab for nucleic acid testing	73.8	77.4
Practitioner-obtained endo-cervical swab for microscopy and culture	16.4	11.0
Blood test for chlamydia	0.0	1.2
Other (please specify)	1.6	1.8

There were similar results for males and females. Nearly 90% of male and female GPs would use first void urine for nucleic acid testing for an asymptomatic patient and about three-quarters of both female and male GPs identified practitioner-obtained endo-cervical swab for nucleic acid testing as a test they would use for an asymptomatic patient.

Table 67: Percentage of GPs selecting test to test asymptomatic FEMALE patient for chlamydia - by location of GP

Female Patients	Urban	Rural	Remote
	n=407	n=83	n=58
First void urine for nucleic acid testing	93.6	84.3	87.9
Mid-stream urine for nucleic acid testing	3.4	8.4	8.6
Mid-stream urine for microscopy and culture	5.9	7.2	10.3
Self-obtained lower vaginal swab for nucleic acid testing	3.7	48.2	27.6
Practitioner-obtained lower vaginal swab for nucleic acid testing	5.9	10.8	13.8
Practitioner-obtained endo-cervical swab for nucleic acid testing	69.1	65.1	67.2
Practitioner-obtained endo-cervical swab for microscopy & culture	18.6	12.0	24.1
Blood test for chlamydia	2.5	1.2	5.2
Other (please specify)	1.0	1.2	1.7

Slightly more GPs in urban locations (93.6%) identified the use of first void urine for nucleic acid testing for an asymptomatic patient than GPs in remote (87.9%) and rural locations (84.3 %). Nearly half the GPs in rural locations (48.2%) would use self-obtained lower vaginal swab for nucleic acid testing for an asymptomatic patient in comparison to less than 30% in remote locations and less than 5% in urban areas. Interestingly almost a quarter of remote GPs would use self-obtained endo-cervical swabs for microscopy and culture. This was higher than for both rural (12%) and urban (19%) GPs.

16. Which diagnostic tests do you use for the following patient presentations?

Table 68: Percentage of GPs selecting test to test asymptomatic MALE patients for chlamydia – all GPs, n = 557

Male Patients	
First void urine for nucleic acid testing, e.g. PCR	94.7
Mid-stream urine for nucleic acid testing, e.g. PCR	3.9
Mid-stream urine for microscopy and culture	4.3
Urethral swab for nucleic acid testing, e.g. PCR	39.9
Urethral swab for smear and culture	15.4
Blood test for chlamydia	2.8
Other (please specify)	0.9

The vast majority of GPs (95%) most commonly would use first void urine to test an asymptomatic male patient for chlamydia. Around 40% would use a urethral swab for PCR testing, and less than 20% would use a urethral swab for smear and culture.

Table 69: Percentage of GPs selecting test to test asymptomatic MALE patients for chlamydia - by age group of GP

Male Patients	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
	n=61	n=164	n=187	n=101	n=44
First void urine for nucleic acid testing	95.1	93.9	98.4	95.0	86.4
Mid-stream urine for nucleic acid testing	1.6	3.0	3.2	4.0	13.6
Mid-stream urine for microscopy and culture	0.0	2.4	2.7	7.9	15.9
Urethral swab for nucleic acid testing	31.1	39.6	42.2	46.5	31.8
Urethral swab for smear and culture	3.3	9.1	13.9	29.7	29.5
Blood test for chlamydia	0.0	1.2	0.5	4.0	18.2
Other (please specify)	1.6	0.6	0.5	1.0	0.0

Over 90% of GPs of all age groups would use first void urine for PCR testing, however fewer GPs over 65 would do so. It can be seen that urethral swab for smear and culture was more often used by GPs in older age groups (55-64, 65 and over).

Table 70: Percentage of GPs selecting test to test asymptomatic MALE patients for chlamydia - by gender of GP

Male Patients	Female GPs	Male GPs
	n=268	n=284
First void urine for nucleic acid testing	97.4	93.0
Mid-stream urine for nucleic acid testing	2.2	5.6
Mid-stream urine for microscopy and culture	0.4	8.1
Urethral swab for nucleic acid testing	42.8	37.5
Urethral swab for smear and culture	11.2	20.0
Blood test for chlamydia	1.5	4.2
Other (please specify)	1.5	0.4

There were few differences between male and female GPs in relation to use of tests for asymptomatic male patients; however male GPs were almost twice as likely (20%) than female GPs (11%) to use a urethral swab for smear and culture.

Table 71: Percentage of GPs selecting test to test asymptomatic MALE patients for chlamydia - by location of GP

Male Patients	Urban n=407	Rural n=83	Remote n=58
First void urine for nucleic acid testing	97.8	89.2	87.9
Mid-stream urine for nucleic acid testing	2.2	9.6	8.6
Mid-stream urine for microscopy and culture	3.4	3.6	12.1
Urethral swab for nucleic acid testing	40.2	39.6	44.8
Urethral swab for smear and culture	16.2	12.0	17.2
Blood test for chlamydia	2.5	1.2	5.2
Other (please specify)	0.7	0.0	1.7

While almost all GPs (98%) in urban regions would use first void urine for PCR testing for an asymptomatic male patient, less than 90% of GPs in remote and rural areas would do so. Mid-stream urine for PCR was more commonly used by remote (9%) and rural (10%) GPs than urban (2%) GPs. Twelve per-cent of GPs in remote areas (12%) used mid-stream urine for microscopy and culture in comparison to less than 4% of rural and urban GPs.

Table 72: Percentage of GPs selecting diagnostic test for FEMALE with vaginal discharge – all GPs, n = 556

First void urine for nucleic acid testing, e.g. PCR	75.2
Mid-stream urine for nucleic acid testing, e.g. PCR	4.1
Mid-stream urine for microscopy and culture	21.5
Self-obtained lower vaginal swab for nucleic acid testing, e.g. PCR	3.4
Practitioner-obtained lower vaginal swab for nucleic acid testing, e.g. PCR	9.4
Practitioner-obtained high vaginal swab for microscopy and culture	75.5
Practitioner-obtained endo-cervical swab for nucleic acid testing, e.g. PCR	75.0
Practitioner-obtained endo-cervical swab for microscopy and culture	50.2
Blood test for chlamydia	5.7
Blood test for syphilis	54.1
Blood test for HIV antibodies	58.3
Blood test for hepatitis B	57.1
Pregnancy test	12.1
Other (please specify)	10.5

For a female with vaginal discharge, *the Guidelines for Managing Sexually Transmitted Infections: A Guide for Primary Health Care Providers* recommends the collection of a high vaginal swab for microscopy and culture (pp. 41-2). This was the choice made by 75.2% of the total sample of GPs. Where pus is present or the cervix is inflamed the *Guidelines for Managing Sexually Transmitted Infections: A Guide for Primary Health Care Providers* recommends the taking of two endo-cervical swabs: one for nucleic acid testing (NAT) and the other for MC&S. GPs reported a high rate of NAT (75%) although only half of the respondents (50.2%) reported testing for MC&S. *The Guidelines for Managing Sexually Transmitted Infections: A Guide for Primary Health Care Providers* also recommends the collection of first void urine for chlamydia NAT; this was reported as current practice by 75.2% of GPs.

Table 73: Percentage of GPs selecting diagnostic test for FEMALE SUSPECTED PID – all GPs, n = 556

First void urine for nucleic acid testing, e.g. PCR	76.8
Mid-stream urine for nucleic acid testing, e.g. PCR	4.4
Mid-stream urine for microscopy and culture	39.7
Self-obtained lower vaginal swab for nucleic acid testing, e.g. PCR	2.7
Practitioner-obtained lower vaginal swab for nucleic acid testing, e.g. PCR	9.4
Practitioner-obtained high vaginal swab for microscopy and culture	71.5
Practitioner-obtained endo-cervical swab for nucleic acid testing, e.g. PCR	78.4
Practitioner-obtained endo-cervical swab for microscopy and culture	58.5
Blood test for chlamydia	9.9
Blood test for syphilis	69.0
Blood test for HIV antibodies	72.3
Blood test for hepatitis B	70.9
Pregnancy test	43.6
Other (please specify)	13.8

For a female with suspected PID the *Guidelines for Managing Sexually Transmitted Infections: A Guide for Primary Health Care Providers* recommends first void urine for NAT (p. 169). This was the choice made by 76.4 % of GPs. The book recommends high vaginal swab for MC&S which was used by 71.5% of GPs. The book also recommends endo-cervical swab for NAT a test used by 78.4% of GPs and endo-cervical swab for MC&S used by 58.5% of GPs.

While the *Guidelines for Managing Sexually Transmitted Infections: A Guide for Primary Health Care Providers* does not specifically recommend additional STI tests for a female with suspected PID, more than two-thirds of GPs answering this question would take the opportunity to test the patient for syphilis, HIV and hepatitis B.

Table 74: Percentage of GPs selecting diagnostic test for MALE WITH NON-PURULENT URETHRAL DISCHARGE – all GPs, n = 556

First void urine for nucleic acid testing, e.g. PCR	91.1
Mid-stream urine for nucleic acid testing, e.g. PCR	4.1
Mid-stream urine for microscopy and culture	30.5
Urethral swab for nucleic acid testing, e.g. PCR	57.1
Urethral swab for smear and culture	60.3
Blood test for Chlamydia	7.3
Blood test for syphilis	65.4
Blood test for HIV antibodies	67.9
Blood test for hepatitis B	65.1
Other (please specify)	11.7

For a male with a non-purulent discharge the *Guidelines for Managing Sexually Transmitted Infections: A Guide for Primary Health Care Providers* recommends first void urine for NAT (p. 44). This was used by 90.8 % of GPs. *The Guidelines for Managing Sexually Transmitted Infections: A Guide for Primary Health Care Providers* also suggests: midstream urine specimen, used by a third of GPs; urethral swab for microscopy, culture and sensitivity used by two-thirds of GPs; and that blood be collected for serological tests for syphilis used by two-thirds of GPs and hepatitis B used by two-thirds of GPs.

17. For treatment of a patient in whom you have diagnosed chlamydia, would you generally use?

Table 75: Percentage of GPs who would generally use one of the following drugs for a patient diagnosed with chlamydia – all GPs, n = 554

Doxycycline	37.2
Azithromycin	86.0
Roxithromycin	3.2
Erythromycin	2.1

For over 85% of GPs azithromycin was the drug of choice to treat chlamydia; however one-third also would sometimes use doxycycline.

Table 76: Percentage of GPs who would generally use one of the following drugs for a patient diagnosed with chlamydia - by age group of GP

	25-34 years n=23	35-44 years n=46	45-54 years n=64	55-64 years n=51	65+ years n=25
Doxycycline	37.7	28	34.2	50.5	56.8
Azithromycin	90.2	93.3	86.1	83.2	63.6
Roxithromycin	0.0	1.8	1.1	6.9	13.6
Erythromycin	0.0	0.0	1.1	5.0	11.4
None of the above	1.6	0.0	1.1	0.0	2.3

Similarly the majority of GPs in all age groups would generally use azithromycin to treat a patient diagnosed with chlamydia. Fewer GPs in the 65 and over age group did so, with over half sometimes using doxycycline and two-thirds sometimes using azithromycin.

Table 77: Percentage of GPs who would generally use one of the following drugs for a patient diagnosed with chlamydia - by gender of GP

	Female n=89	Male n=118
Doxycycline	33.1	41.4
Azithromycin	88.8	83.5
Roxithromycin	1.9	4.6
Erythromycin	0.7	3.5
None of the above	1.1	0.4

While azithromycin was generally used by most GPs regardless of gender doxycycline was used by more male than female GPs.

Table 78: Percentage of GPs who would generally use one of the following drugs for a patient diagnosed with chlamydia - by location of GP

	Urban n=402	Rural n=83	Remote n=58
Doxycycline	38.8	38.6	32.8
Azithromycin	87.8	86.7	87.9
Roxithromycin	3.2	3.6	3.4
Erythromycin	2.0	1.2	3.4
None of the above	0.7	0.0	1.7

Again a clear majority of GPs in all locations would generally use azithromycin to treat a patient diagnosed with chlamydia.

18. Which of these is an effective single dose treatment for chlamydia?

Table 79: Percentage of GPs who believed the listed drugs to be an effective single dose for chlamydia – all GPs, n = 555

Doxycycline	2.1
Azithromycin	93.4
Roxithromycin	1.8
Erythromycin	0.2
None of the above	2.8

Overwhelmingly GPs nominated azithromycin as the effective single dose treatment for chlamydia, the treatment recommended in the *Guidelines for Managing Sexually Transmitted Infections: A Guide for Primary Health Care Providers*.

Table 80: Percentage of GPs who believed the listed drugs to be an effective single dose for chlamydia - by age group of GP

	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
	n=23	n=46	n=64	n=51	n=25
Doxycycline	1.6	1.8	2.7	1.0	4.5
Azithromycin	96.7	95.7	95.7	94.1	75.0
Roxithromycin	0.0	0.0	1.1	3.0	11.4
Erythromycin	0.0	0.0	0.0	1.0	0.0
None of the above	0.0	3.0	1.6	2.0	13.6

Almost all GPs in all age groups, except those aged 65 and over, selected azithromycin as the most effective single treatment for chlamydia. Only three-quarters of GPs aged over 65 did so. Older GPs appeared to be less informed than their younger counterparts with one in ten nominating roxithromycin or none of the above as an effective single dose treatment.

Table 81: Percentage of GPs who believed the listed drugs to be an effective single dose for chlamydia - by gender of GP

	Female	Male
	n=89	n=118
Doxycycline	1.1	2.8
Azithromycin	95.2	92.3
Roxithromycin	1.5	2.1
Erythromycin	0.4	0.0
None of the above	1.1	4.6

Both female GPs and male GPs knew that azithromycin was the most effective single dose treatment for chlamydia.

Table 82: Percentage of GPs who believed the listed drugs to be an effective single dose for chlamydia - by location of GP

	Urban	Rural	Remote
	n=404	n=81	n=58
Doxycycline	2.5	12.0	1.7
Azithromycin	95.3	91.6	94.8
Roxithromycin	2.0	2.5	0.0
Erythromycin	0.2	0.0	0.0
None of the above	3.0	2.4	1.7

Most GPs in all locations reported use of azithromycin as the most effective single treatment for chlamydia; more rural GPs (12%) nominated doxycycline than urban (2.5%) or remote (1.7%) GPs.

19. Which of these STIs are notifiable to the Department of Health WA? (please tick all applicable)

Table 83: Percentage of GPs who knew which STIs are notifiable to the Department of Health – all GPs, n = 560

Chlamydia	98.6
Gonorrhoea	96.1
Syphilis	96.3
Human Papilloma Virus	5.9
Lymphogranuloma venereum	62.2
Herpes	14.2
HIV	96.6
AIDS	93.6
Donovanosis	68.6
Chancroid	71.6
None of the above	0.5

Almost all GPs knew that chlamydia, gonorrhoea, donovanosis, HIV, AIDS, and syphilis are the STIs which are notifiable in Western Australia. Fewer were aware that donovanosis (69%) and chancroid (72%) are also notifiable.

Table 84: Percentage of GPs who knew which STIs are notifiable to the Department of Health - by age group of GP

STIs	25-34 years (n=61)	35-44 years (n=163)	45-54 years (n=186)	55-64 years (n=100)	65+ years (n=43)
Chlamydia	100.0	99.4	99.5	99.0	97.7
Gonorrhoea	98.4	97.0	96.8	98.0	88.6
Syphilis	95.1	97.0	97.3	98.0	93.2
Human Papilloma Virus	4.9	6.1	2.7	6.9	18.2
Lymphogranuloma venereum	57.4	61.0	71.1	59.4	45.5
Herpes	13.1	12.2	13.4	16.8	20.5
HIV	98.4	98.2	96.8	98.0	93.2
AIDS	86.9	93.9	95.2	98.0	90.9
Donovanosis	70.5	70.1	74.3	72.3	34.1
Chancroid	65.6	71.3	76.5	79.2	47.7
None of the above	0.0	0.6	1.1	0.0	0.0

The vast majority of GPs in all age groups reported knowing that chlamydia, gonorrhoea and syphilis were notifiable infections. Fewer GPs aged 65 and over identified gonorrhoea as notifiable, and fewer of this group knew that other notifiable infections were notifiable. This was particularly so for donovanosis and chancroid where half as many GPs aged 65 and over as those younger than 64 knew these infections were notifiable.

Table 85: Percentage of GPs who knew which STIs are notifiable to the Department of Health - by gender of GP

STIs	Female (n=269)	Male (n=284)
Chlamydia	99.6	98.2
Gonorrhoea	97.8	95.4
Syphilis	97.4	96.5
Human Papilloma Virus	3.0	8.4
Lymphogranuloma venereum	60.6	64.6
Herpes	10.4	18.2
HIV	96.3	97.5
AIDS	92.2	95.4
Donovanosis	69.5	69.1
Chancroid	73.6	71.2
None of the above	0.7	0.4

Slightly more female than male GPs knew which STIs which were notifiable and which were not. Nearly three times as many male GPs (8.4%) as female GPs (3.0%) believed Human Papilloma Virus to be a notifiable infection and nearly twice as many male GPs (18.2%) as female GPs (10.4%) believed herpes to be a notifiable infection.

Table 86: Percentage of GPs who knew which STIs are notifiable to the Department of Health - by location of GP

STIs	Urban (n=408)	Rural (n=83)	Remote (n=58)
Chlamydia	99.0	98.8	100.0
Gonorrhoea	97.5	98.8	97.5
Syphilis	98.0	97.6	97.5
Human Papilloma Virus	6.7	3.6	3.4
Lymphogranuloma venereum	63.4	60.2	62.1
Herpes	14.4	12.1	14.5
HIV	98.0	91.4	91.6
AIDS	96.0	91.6	91.4
Donovanosis	67.6	82.8	71.1
Chancroid	74.0	71.1	67.2
None of the above	0.2	0.0	3.4

GPs in all locations were very well aware that chlamydia, gonorrhoea and syphilis were notifiable infections. Slightly higher numbers of GPs in urban than in rural or remote locations reported knowing that HIV and AIDS were notifiable infections. It was not surprising that more GPs in rural locations knew donovanosis to be a notifiable infection as this infection is more commonly seen in remote and rural settings than in urban settings.

20. If you diagnose a patient with a notifiable STI e.g. genital chlamydia, how often would you complete a disease notification form and send it to the Department of Health?

Table 87: Percentage of GPs completing and sending a disease notification form for a notifiable STI - by all GPs, n =551

Always	85.3
Mostly	11.3
Sometimes	2.5
Never	0.9

Almost all GPs always or mostly completed a disease notification form.

Table 88: Percentage of GPs completing and sending a disease notification form for a notifiable STI - by age group of GP

	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
	n=61	n=163	n=182	n=97	n=43
Always	93.4	91.4	86.3	73.2	79.1
Mostly	6.6	6.7	11.5	16.5	20.9
Sometimes	0.0	1.2	1.6	7.2	0.0
Never	0.0	0.6	0.5	3.1	0.0

Fewer GPs over the age of 55 than under 55 always sent a disease notification form to DoH WA.

Table 89: Percentage of GPs completing and sending a disease notification form for a notifiable STI - by gender of GP

	Female	Male
	n=264	n=279
Always	92.0	79.2
Mostly	6.4	15.8
Sometimes	0.8	3.9
Never	0.8	1.1

More female than male GPs reported always completing and sending disease notification forms to DoH WA.

Table 90: Percentage of GPs completing and sending a disease notification form for a notifiable STI - by location of GP

	Urban	Rural	Remote
	n=399	n=82	n=57
Always	86.8	81.7	84.2
Mostly	9.5	16.9	15.8
Sometimes	2.8	1.2	0.0
Never	1.0	1.2	0.0

The majority of GPs in urban, rural and remote locations always notified DoH WA of an STI.

21. In relation to patients you see who have an STI

In the *Guidelines For Managing Sexually Transmitted Infections, A Guide For Primary Health Care Providers* it is clearly stated that:

The primary care provider is responsible for ensuring that reasonable efforts are made to identify, and subsequently screen, identified sexual contacts (page 54.)

21A In relation to patients you see who have an STI do you consider that contact tracing is the responsibility of the GP?

Table 91: Percentage of GPs who consider that contact tracing is the responsibility – all GPs, n =562

Always	7.4
Mostly	17.2
Sometimes	51.6
Never	21.3

Despite the recommendations in the *Guidelines For Managing Sexually Transmitted Infections, A Guide For Primary Health Care Providers* it can be seen that less than 10% always and less than 20% of GPs mostly considered contact tracing to be their responsibility. Of even more concern was that 21% of GPs considered contact tracing **never** to be their responsibility.

It is clear that DoH WA needs to consider ways to inform GPs about their responsibility for contact tracing. As reported in Question 32 below there is resistance to this responsibility with many GPs seeing contact tracing as the Department's statutory responsibility. Other GPs expressed the need for more support at the practice level if they are to accept this responsibility.

Table 92: Percentage of GPs who consider that contact tracing is the responsibility of the GP - by age group of GP

	25-34 years n=60	35-44 years n=162	45-54 years n=186	55-64 years n=100	65+ years n=43
Always	14.8	5.5	5.9	10.9	4.5
Mostly	14.8	16.5	18.7	15.8	18.2
Sometimes	52.5	55.5	50.8	47.5	54.5
Never	16.4	21.3	20.9	24.8	20.5

There were similar views on contact tracing from GPs across all age groups.

Table 93: Percentage of GPs who consider that contact tracing is the responsibility of the GP - by gender of GP

	Female n=264	Male n=281
Always	7.4	7.7
Mostly	18.2	15.4
Sometimes	49.4	54.7
Never	22.3	20.4

Similar numbers of male and female GPs always, mostly or never saw contact tracing as their responsibility.

Table 94: Percentage of GPs who consider that contact tracing is the responsibility of the GP - by location of GP

	Urban	Rural	Remote
	n=397	n=82	n=58
Always	6.8	7.3	15.5
Mostly	18.6	14.6	17.2
Sometimes	52.1	58.5	50.0
Never	22.4	19.5	17.2

With the exception of GPs in remote locations (32.7%) less than 25% of GPs in urban and rural locations always or mostly saw that contact tracing is their responsibility.

21B. In relation to patients you see who have an STI do you tell the patient to advise their contacts to seek medical treatment?

Table 95: Percentage of GPs who tell the patient to advise their contacts to seek medical treatment – all GPs, n = 562

Always	87.1
Mostly	9.0
Sometimes	2.5
Never	0.4

The vast majority of GPs always or mostly told patients with an STI to advise their sexual contacts to seek medical treatment.

Table 96: Percentage of GPs who tell the patient to advise their contacts to seek medical treatment - by age group of GP

	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
	n=60	n=162	n=186	n=100	n=43
Always	90.2	86.6	86.1	89.1	88.6
Mostly	6.6	9.8	10.7	7.9	6.8
Sometimes	3.3	3.7	1.1	1.0	4.5
Never	0.0	0.0	1.1	0.0	0.0

There was consistency in response to this question across all age groups with almost all GPs always or mostly telling their patients with an STI to advise their contacts to seek medical treatment.

Table 97: Percentage of GPs who tell the patient to advise their contacts to seek medical treatment - by gender of GP

	Female	Male
	n=264	n=281
Always	85.9	88.8
Mostly	10.4	7.7
Sometimes	3.0	2.1
Never	0.0	0.7

Similarly, almost all male and female GPs mostly or always told patients with an STI to inform their sexual contacts about the need to seek medical treatment.

Table 98: Percentage of GPs who tell the patient to advise their contacts to seek medical treatment - by location of GP

	Urban	Rural	Remote
	n=406	n=83	n=56
Always	88.9	92.8	75.0
Mostly	8.9	4.8	17.9
Sometimes	1.7	2.4	7.1
Never	0.5	0.0	0.0

Around 90% of GPs in rural and urban locations reported always telling their patients to inform their sexual contacts about the need to seek treatment. However only 75% of GPs in remote locations always told patients to do so. When the 'always' and 'mostly' categories were combined, however, there was almost no difference between the responses from the three locations.

21C. In relation to patients you see who have an STI do you prescribe medication for the contact of a patient with an STI without seeing that contact?

Table 99: Percentage of GPs prescribing medication for the contact of a patient with an STI without seeing the contact – all GPs, n = 562

Always	1.1
Mostly	1.2
Sometimes	25.7
Never	69.7

Over two-thirds of GPs would not prescribe medication for the contact of a patient with an STI without seeing that contact, although approximately one-quarter would sometimes do so.

Table 100: Percentage of GPs prescribing medication for the contact of a patient with an STI without seeing the contact - by age group of GP

	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
	n=60	n=162	n=186	n=100	n=43
Always	0.0	1.8	1.1	0.0	2.3
Mostly	1.6	1.2	0.0	4.5	21.0
Sometimes	24.6	24.4	28.3	29.7	15.9
Never	73.8	72.0	67.9	64.4	75.0

Between two-thirds and three-quarters of GPs of all ages would never prescribe medication without seeing the contact of one of their patients with an STI.

Table 101: Percentage of GPs prescribing medication for the contact of a patient with an STI without seeing the contact - by gender of GP

	Female	Male
	n=264	n=281
Always	0.4	1.8
Mostly	0.7	1.8
Sometimes	26.8	25.3
Never	70.2	69.1

Both male and female GPs responded similarly to this question, about 70% of GPs never prescribing medication for the contact of a patient with an STI.

Table 102: Percentage of GPs prescribing medication for the contact of a patient with an STI without seeing the contact - by location of GP

	Urban	Rural	Remote
	n=400	n=83	n=55
Always	1.0	1.2	1.8
Mostly	1.0	2.4	1.8
Sometimes	24.0	36.1	32.7
Never	74.0	60.2	63.6

More GPs in urban locations (74%) than in rural (60.2%) and remote (63.6%) locations reported that they would never prescribe medication without seeing the contact of one of their patients with an STI.

21D. In relation to patients you see who have an STI do you check with the patient whether they have followed up their contacts?

Table 103: Percentage of GPs who check with patients to see whether they have followed up their contacts – all GPs, n = 562

Always	25.7
Mostly	35.1
Sometimes	30.1
Never	6.9

Only one-quarter of all GPs always checked with patients with an STI to see if they had followed up their contacts and a further one-third mostly did so.

Table 104: Percentage of GPs who check with patients to see whether they have followed up their contacts - by age group of GP

	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
	n=60	n=162	n=186	n=100	n=43
Always	29.5	25.0	20.9	27.7	40.9
Mostly	27.9	36.0	35.8	38.6	34.1
Sometimes	37.7	31.1	32.6	21.8	22.7
Never	4.9	6.7	8.6	7.9	2.3

GPs in the age group of 65 and over were much more likely to always or mostly check with their patients to see if they had followed up their sexual contacts than GPs in all the other age groups.

Table 105: Percentage of GPs who check with patients to see whether they have followed up their contacts - by gender of GP

	Female	Male
	n=264	n=281
Always	29.7	22.5
Mostly	35.7	34.4
Sometimes	26.8	33.3
Never	5.6	8.4

More female GPs were likely to always or mostly check with their patients to see if they had followed up their sexual contacts than male GPs.

Table 106: Percentage of GPs who check with patients whether they have followed up their contacts - by location of GP

	Urban	Rural	Remote
	n=402	n=82	n=55
Always	29.6	9.5	12.7
Mostly	36.8	69.2	23.6
Sometimes	29.9	24.4	47.3
Never	4.5	12.2	16.4

More than three-quarters of GPs in rural locations were likely to always or mostly check with their patients to see if they had followed up their sexual contacts compared to GPs in urban (66.4%) and remote (36.3%) locations.

21E. In relation to patients you see who have an STI do you ask the patient to tell you the name(s) of their contact(s) for you to follow up?

Table 107: Percentage of GPs who ask a patient the names of the patient's contacts for GP follow up – all GPs, n = 562

Always	5.1
Mostly	5.0
Sometimes	28.0
Never	58.3

Almost 60% of GPs never request the names of sexual contacts of patients with an STI, while under 30% sometimes do so.

Table 108: Percentage of GPs who ask a patient the names of the patient's contacts for GP follow up - by age group of GP

	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
	n=60	n=162	n=186	n=100	n=43
Always	3.3	6.1	3.7	6.9	6.8
Mostly	8.2	6.1	4.3	3.0	4.5
Sometimes	42.6	29.3	20.3	35.6	20.5
Never	45.9	56.7	66.3	51.5	63.6

Around 55% of GPs in all age groups would never or only sometimes ask a patient to tell them names of their contacts for the GP to follow up.

Table 109: Percentage of GPs who ask a patient the names of the patient's contacts for GP follow up - by gender of GP

	Female	Male
	N=264	n=281
Always	4.5	5.6
Mostly	4.8	5.3
Sometimes	30.5	26.0
Never	55.8	61.1

Approximately equal numbers of male and female GPs would never or sometimes ask a patient to tell them names of their contacts for GPs to follow up.

Table 110: Percentage of GPs who ask a patient the names of the patient's contacts for GP follow up to - by location of GP

	Urban	Rural	Remote
	n=396	n=78	n=58
Always	3.0	2.6	25.9
Mostly	4.5	6.4	8.6
Sometimes	28.8	30.8	25.9
Never	63.4	60.3	39.7

Around 90% of GPs in urban and rural locations would never or only sometimes ask a patient to tell them names of their sexual contacts. This contrasted with only two-thirds of GPs in remote locations.

21F. In relation to patients you see who have an STI do you inform the Department of Health and ask for their assistance?

Table 111: Percentage of GPs informing DoH WA about patients with an STI – all GPs, n = 562

Always	50.7
Mostly	17.9
Sometimes	21.6
Never	8.9

Just over half of GP respondents always inform DoH WA of patients with an STI and ask for assistance.

Table 112: Percentage of GPs informing DoH WA about patients with an STI - by age group of GP

	25-34 years	35-44 years	45-54 years	55-64 years	65+ years
	n=60	n=162	n=186	n=100	n=43
Always	45.9	48.2	57.8	42.6	59.1
Mostly	26.2	18.3	16.0	16.8	18.2
Sometimes	24.6	25.6	18.7	22.8	13.6
Never	3.3	7.3	7.5	16.8	6.8

GPs aged 65 and over (around 60%) were more likely to always inform DoH WA and seek their assistance when managing patients with an STI. This contrasted with the number of GPs in younger age groups where less than 50% would always inform DoH WA and seek their assistance.

Table 113: Percentage of GPs informing DoH WA about patients with an STI - by gender of GP

	Female	Male
	n=264	n=281
Always	49.8	52.3
Mostly	17.1	18.9
Sometimes	24.5	18.9
Never	8.2	9.1

Over half of the male GPs and nearly half of the female GPs would always inform DoH WA and seek their assistance when responding to patients with an STI.

Table 114: Percentage of GPs informing DoH WA about patients with an STI - by location of GP

	Urban	Rural	Remote
	n=406	n=82	n=58
Always	50.0	54.9	53.4
Mostly	18.2	20.7	13.8
Sometimes	24.1	15.9	19.0
Never	7.6	8.5	13.8

More GPs in rural locations, than those in urban and remote locations, would always inform DoH WA and seek their assistance when managing patients with an STI.

21G. In relation to patients you see who have an STI do you review the patient's history in regard to risk behaviour at the time or at the next consultation?

Table 115: Percentage of GPs reviewing the risk history of a patient with an STI – all GPs, n = 562

Always	42.4
Mostly	35.6
Sometimes	17.2
Never	2.3

Over three-quarters of GPs would always or mostly review the risk behaviour of a patient with an STI at the time or at the next consultation.

Table 116: Percentage of GPs reviewing the risk history of a patient with an STI - by age group of GP

	25-34	35-44	45-54	55-64	65+
	n=60	n=162	n=186	n=100	n=43
Always	34.4	40.9	40.6	45.5	61.4
Mostly	49.2	39.0	33.7	33.7	18.2
Sometimes	13.1	18.3	18.2	16.8	18.2
Never	3.3	0.6	2.7	4.0	0.0

Similar numbers of GPs in all age groups would always or mostly review their patient's history in regard to risk behaviour at the time or at the next consultation.

Table 117: Percentage of GPs reviewing the risk history of a patient with an STI - by gender of GP

	Female	Male
	n=264	n=281
Always	44.6	41.1
Mostly	33.1	37.5
Sometimes	17.8	16.8
Never	1.9	2.8

Male and female GPs showed similar practices with over three-quarters always or mostly reviewing their patient's history in regard to risk behaviour at the time or at the next consultation.

Table 118: Percentage of GPs reviewing the risk history of a patient with an STI - by location of GP

	Urban	Rural	Remote
	n=400	n=81	n=57
Always	43.5	35.8	54.4
Mostly	37.5	42.0	21.1
Sometimes	17.1	17.3	22.8
Never	1.8	4.9	1.8

Once again, there was consistency between GPs in all locations, with over three-quarters always or mostly reviewing their patient's history in regard to risk behaviour at the time or at the next consultation.

Questions 22-28 collected demographic details of participants. These results were presented on page 10.

29. IN RELATION TO STIs, DO YOU EVER GIVE PATIENTS INFORMATION PAMPHLETS?

Table 119: Percentage of GPs giving patients STI information pamphlets - all GPs, n = 554

Always	17.4
Mostly	32.3
Sometimes	39.5
Never	8.7

Nearly half of the responding GPs always or mostly gave their patients information pamphlets. Responses to Questions 30 and 31 document the varied sources of these pamphlets.

30. SOURCE OF PAMPHLETS GIVEN OUT TO PATIENTS OR IN WAITING ROOM

A. Department of Health, WA **78.4%**

B. Specialist College: **4.65%**

Murtagh Patient Education
RACGP
RACOG
RANZCOG
Sexual Health Clinics
Sexual Health Services

C. Computerised medical software: **9.2%**

Best Practice
Medical Director
RACGP

D. Internet; identified websites: **6.3%**

Betterhealth Department of Health, Victoria
Family Planning Association (FPA); FPA Queensland; FPA WA
Google search engine
Healthinsite, Department of Health and Ageing Canberra
Medical Director
North East Valley Division of GP Victoria
DoH WA Department
www.herpes.com.au
www.mydr.com.au
www.thefacts.com.au;

E. Other; please specify: **15.3%**

Aboriginal health publications
Community health centres
Drug and/or pharmaceutical companies
Family Planning WA
Hospitals and staff
Infomed
Murtagh
SA Health Department
WA Hep C Council

31. Which reference source do you tend to use when managing patients with STIs?

A. 61% of GPs used the Department of Health, WA, *Guidelines for Managing STIs: a Guide for Primary Health Care Workers*. This is commonly known as the “Silver Book” and is available on-line.

B. 67% of GPs used *Therapeutic Guidelines: Antibiotic*. This is commonly known as the “Pink Book” and is available on-line. It provides GPs with advice about the use of antibiotics for clinical management of patients.

C. Journals:

Nearly 93% of the respondents identified a wide range of professional journals as a reference source for managing patients with STIs:

- *Australian Doctor*
- *Australian Family Physician*
- *Australian Medical Journal*
- *Australian and New Zealand Journal of Obstetrics and Gynaecology*
- *Current Therapy*
- *Disease Watch*
- *Family Physician*
- *Medicine Today*
- *Medline*
- *Modern Medicine*

D Textbooks:

About 8% cited the following as reference sources for managing patients with STIs:

- *Bayne Primary Care*
- Harrison
- McMillan STIs
- Merck Manual
- Murtagh - varied titles
- *National STI Management Guidelines*.

E. Internet

2.5% of GPs cited the following websites or organisations as a reference source for managing patients with STIs:

- Aids Action
- CDC (Center for Communicable Diseases)
- e-medicine
- The Facts site.
- FPA Queensland
- Google search engine.

F. None in particular

G. Other

32. ARE THERE ANY COMMENTS YOU WOULD LIKE TO MAKE?

The final section of the questionnaire provided space for GPs to add anything else that might not have been covered in the previous 31 sets of questions.

Eighty eight GPs took the opportunity to comment, representing about 15% of the total respondents. Eight GPs provided comprehensive feedback about their clinical practice and experiences in relation to the questionnaire and the whole chlamydia campaign; twenty seven made briefer comments and the remaining fifty three wrote dot point or one sentence remarks about the value of the questionnaire in raising their awareness of STIs and of chlamydia in particular.

Many GPs made mention of the value of the mass media campaign and the questionnaire as a reminder for them to review, update and improve their clinical practice and their knowledge of STIs, particularly chlamydia. One GP thought the campaign was very timely as it seemed to him that many young people are not aware of the importance of condom use, especially if using the contraceptive pill, and also many young people believe that STIs are a thing of the past.

Some GPs criticised both the questionnaire (as taking too long to complete) and the campaign, as there many other public state and national health campaigns and initiatives in which GPs are expected to participate and they saw themselves as overworked. Many work part-time and again felt the pressure of responding to campaigns on top of their already busy practice schedules. A number commented on work pressure and their work loads. A small number of critical comments challenged the validity of the questionnaire and the process.

One respondent took the time to detail all the surveys, questionnaires, feedback and screening requests to which he had responded in the previous two years. These numbered 35 and represented just the specific items about which he could recall getting mail. The list documented an amazing range of diseases, health conditions and illnesses of which GPs had to be aware in addition to their involvement in an equally broad range of health-promoting initiatives at state and national levels.

A number of respondents were concerned that there were no specific questions to capture the experience of GPs working in Indigenous health and that a number of questions couldn't be usefully answered by GPs working in Indigenous health. One GP wrote " ... you should have asked if we worked in Aboriginal health as it makes a big difference to many questions."

Some GPs raised the concern that patients in the target group are often unable to afford the lengthy consultations entailed by STI screening and counselling. Some concern was also expressed that patients will resist deep questioning about their sex lives, and so may not give accurate answers. Many doctors expressed the belief that most people are well aware of issues raised in the questionnaire and could use their use own knowledge.

Some rural GPs expressed concern about the lack of readily accessible support services for their patients.

A number of GPs were not aware of DoH WA guidelines or where to access them. However even more critically a number of GPs believed contact tracing was the responsibility of DoH WA. Some GPs saw DoH WA as having the required statutory powers and they objected to the notion that they are responsible for following up contacts. One GP commented that while contact tracing for his patients was done by the local Population Health Unit the GP got no feedback to confirm if tracing had been done or if notifications to DoH WA had been made.

Some GPs wrote specific comments related to particular questions. Question 16 (Which diagnostic tests would you use for the following patient presentations?) prompted the following responses or comments:

- One GP would not check for syphilis, HIV or Hepatitis at the same consultation.
- Despite encouragement “some blokes just won’t be in for urethral swabbing” or as another GP put it “I would use urethral swab as a diagnostic test if the patient was prepared to have it done”.
- One GP, who tested at least weekly for STIs, expected more positive tests and expressed surprise at how few specimens were confirmed as STIs. He thought “It might be more if I test more frequently for more subtle symptoms”.
- “Patients with symptoms of STI often present to our clinic and I never see them again. Seeking treatment anonymously or mobile population living in flats who don’t stay in the area long”.

However the majority of the written comments were positive and supportive of the campaign, including the questionnaire, and the importance of raising community awareness of chlamydia and STIs in general. The following exemplify the positive response to the whole activity.

- “Well constructed survey.”
- “I think this is a very useful study. I look forward to receiving the answers.”
- (The questionnaire) “has made me think about my practice already.”
- “Questionnaires of this nature are very valuable. It is seldom that I get the opportunity to analyse my practice and actions.”
- “Your study has highlighted gaps in my practice.”
- “I feel that the best approach to this epidemic is education so that patients come to us and ask to be tested.”
- “... fantastic to alert people to chlamydia”
- “It is important that public health programs are done regularly to ‘get the message out’ to the target population. This empowers the patient to ask their GP.”
- “I think a campaign is well overdue as younger people don’t seem to grasp the importance of using condoms and are amazed when they catch something. They seem to think that STIs are a thing of the past.”

4. CHLAMYDIA CLINICAL AUDIT RESULTS

Audit Concept

The audit process was designed to provide opportunities for GPs to enhance their knowledge and skills in relation to chlamydia risk assessment for patients aged 15 - 25 years.

GPs were asked to document their practice in relation to sexual history taking, assessment of risk for chlamydia and testing for chlamydia. The audit followed the guidelines established by the RACGP which emphasise that the audit is "... a planned medical education activity designed to help GPs review aspects of their own clinical performance in practice with the aim of improving patient care." (*The Quality Assurance and Continuing Professional Development Program Handbook 2005-2007 Triennium. RACGP, 2004 p 23.*)

Audit Objectives

The objectives of the audit were:

- to understand the behaviours which may place young people at risk of chlamydia
- to include a lifestyle risk assessment in all consultations with young people
- to learn to include safe sex education in consultations with young people
- to learn about testing for chlamydia
- to learn about management of chlamydia, including partner notification.

Audit Participation and Registration

The baseline questionnaire sent to all GPs in WA as part of DoH WA's campaign on chlamydia included a sheet headed *Further Opportunities* which offered the opportunity to:

- participate in a clinical audit of genital chlamydia free of charge which would earn 30 Royal Australian College of General Practitioners (RACGP) CDP points or 20 Australian College of Rural and Remote Medicine (ACRRM) CDP points and/or
- enter a draw for a case of fine red wine.

Nearly all the GPs entered the draw for the wine and 250 GPs expressed interest in the Clinical Audit.

Audit Design

The Australian Research Centre in Sex, Health and Society (ARCSHS) designed the clinical audit in collaboration with DoH WA. ARCSHS also liaised with the RACGP WA and the ACRRM to ensure that the audit met their respective guidelines and would be approved for the allocation of points.

The RACGP QA&CPD Program assessed the education activity as a 5-step Clinical Audit. GPs participating in the audit had to complete Steps 1-5 to receive a total of 30 Category 1 points.

The clinical audit activity was approved by the national ACRRM Professional Development Program (PDP) office; those GPs who completed the five steps

of the audit activity would earn 20 PDP points in the mandatory points component.

The Audit Package

Those GPs who had expressed interest in participating in the clinical audit received a package from ARCSHS comprising:

- a covering letter which included the ARCSHS website address with links to a specific page with information about additional resources on chlamydia, broader sexual health issues and how to make practices more youth-friendly
- a sheet outlining the process for completing the clinical audit on chlamydia
- a pre-audit questionnaire
- a registration form
- data collection forms (20)
- participant informed consent forms (20)
- a resource order form (DoH WA) for a range of free resources on sexual health.

The Audit Process

Participating GPs must have completed the baseline activity - the *Chlamydia and Sexual Health* questionnaire - which was distributed to all GPs in WA in June 2005.

This questionnaire had been developed as part of a predisposing activity for DoH WA's mass media campaign on Chlamydia which included the delivery of a package of educational materials for all GPs.

GPs were sent a copy of the Gold Standard Answers within a week of returning their completed questionnaires to ARCSHS.

Subsequently all GPs in WA received a package of information from DoH WA which contained:

- testing guidelines
- partner notification sample letter
- DoH WA notification information
- pamphlet
- poster and
- a copy of the Gold Standard Answers to the baseline questionnaire. (This was done to ensure that GPs who decided not to complete the original questionnaire still had the opportunity to learn the correct answers.)

In effect this meant that all GPs participating in the clinical audit would have received two learning opportunities to allow improvement in their chlamydia testing and management practices.

GPs were required to audit 20 cases after which they would receive collated results (of all participating GPs) and their own responses. This would hopefully allow them to reflect on their current practice in terms of chlamydia

and sexual health as well as on any changes they had made or which they might need to make to ensure best practice.

GPs could choose whether to audit their last 20 cases of 15-25 year olds or the next 20 after receipt of the audit materials. In addition GPs who had not diagnosed chlamydia within these 20 cases were required to submit up to 5 additional cases of patients in any age in whom chlamydia had been diagnosed. This requirement ensured that GPs would have the opportunity to reflect on best practice in relation to their management of chlamydia.

The audit was designed and implemented in accordance with the guidelines for RACGP Quality Assurance and Continuing Professional Development (QA&CPD) 2005-2007 triennium as follows:

RACGP Requirement	Clinical Audit Equivalent
Step 1 Needs Assessment	Baseline Questionnaire
Step 2 Identify Standards	Gold Standard Answers
Step 3 Data Collection and Analysis	Clinical Audit
Step 4 Identify and Implement Change	Feedback to GPs
Step 5 Monitor Progress	Reflection on Data

GPs used *Data Collection Forms* (see Appendix 2.2) to document their case management of the required 20 patients. GPs were also required to seek informed consent from their patients. The *Participant Informed Consent Form* described the audit in plain English and informed patients about the research project and audit process and the use of data. These forms were to be securely and confidentially stored at the GPs' practice.

When GPs had completed their 20 audits they were returned to ARCSHS for data analysis. The data from individual GPs' audits were recorded separately and subsequently pooled. Pooled data as well as GPs' individual results were sent back to participating GPs on the *Data Feedback Form*.

The final step of the audit required the GPs to complete and return to ARCSHS a *Reflection on the Data Form* (see Appendix 2.3) and an *Activity Evaluation Sheet* see (Appendix 2.4). This last step was important in that it provided a very clear opportunity for the participating GPs to monitor their own practice and to compare and contrast this to that of their peers. More importantly it provided them with the opportunity to reflect on their knowledge and skills and to identify areas for future improvement.

Audit findings

Of the 250 GPs who initially expressed interest in completing the clinical audit only 32 finally did so. All of these were RACGP members.

Once the GPs had received the audit package many realised that they would not be able to meet the requirements for a variety of reasons:

- GPs who worked part-time would not see enough patients in the fixed time frame.
- A number of GPs worked in either geriatric practices or in a practice where the majority of patients were outside the targeted 15-25 year old age range.
- A number of GPs would have finished a locum placement or contract before having time to audit 20 cases.
- A number of GPs were on maternity leave or would start this leave in the specified time frame.
- A few GPs said that they didn't need any more Category One points.
- Some GPs replied that they had been in accident or were on other forms of sick leave and so would not be able to audit 20 cases in the time frame.
- A few GPs said that after understanding what was involved they were too busy to participate.
- A few GPs expressed concern that they were being asked to do this study without any support when they were already too busy.
- One GP working in a remote location with mostly Indigenous patients was unable to participate as communities had only recently had a major STI screening program. It would not have been culturally appropriate to cover the same issues again during consultations unless it was clinically indicated.

Of the 32 audits returned to ARCSHS 6 did not meet the stated criteria of 20 cases of 15-25 year olds or up to 5 additional cases of patients in any age in whom chlamydia had been diagnosed.

- One GP returned 4 completed audits
- One GP returned 7 completed audits (with an accompanying note acknowledging the shortfall but saying he/she sent them as they may be of some use to the research project)
- One GP audited 14 of his/her required 20 cases outside of the designated age range, of these the patients' ages ranged from 28 to 74
- One GP audited 6 patients aged over 25 whose ages ranged from 27 to 47
- One GP audited 5 patients older than 25 whose ages ranged from 29 to 40
- One GP included two patients aged 29 and 40 in the 20 cases.

On advice from the RACGP all of these were awarded PDP points as the RACGP's aim is to ensure that GPs attempt all the steps of the educational activity.

One GP who worked part-time chose to do a retrospective audit but did not seek informed consent from any of these 20 cases. This was acknowledged

and the GP commented that while this might invalidate his/her participation he/she had still found completing the audit to be a very useful activity.

On advice from the RACGP the 20 cases of this GP were accepted as the data collection and analysis was not dependent on a patient's known identity. ARCSHS had not undertaken to keep the Informed Consent forms so any concerns held by patients would have to be resolved at the practice level.

Audit Assessment

Once the audit data had been recorded and analysed the names of participating GPs were forwarded to the RACGP to register the allocation of the points.

The RACGP awarded 30 Category One points to all GPs who completed each of the five steps in the audit process.

All GPs who had satisfied the audit activity requirements were sent Certificates of Participation from ARCSHS.

ARCSHS Website

GPs who had expressed an interest in participating in the audit were informed that there was information about chlamydia on the ARCSHS website. During the period of the audit, from September to November 2005, there were 122 individual hits on this site, approximately 40 per month. Subsequently from December 2005 through to February 2006, there were a further 112 hits, about 38 per month. While it is not possible to say these were all from WA GPs, the site was only advertised to this audience.

CHLAMYDIA CLINICAL AUDIT - GPs' REFLECTION ON THE DATA

1. Did the audit enable you to reflect on your ability to assess lifestyle risk in 15-25 year old patients?

- | | |
|------------------------|----|
| Yes | 27 |
| No | 1 |
| Partly, please explain | 2 |
- "more conscious effort to ask about life style risks"
 - "became more aware of how to ask patient"
 - "still don't have strategy to introduce subject just because of person's age i.e. if their presenting problem is not contraception/STI"

2. Did the audit enable you to reflect on your ability to take a sexual history from a patient 15-25 years old?

- | | |
|------------------------|----|
| Yes | 25 |
| No | 1 |
| Partly, please explain | 5 |
- "main constraint waiting room pressure and fact many in age group are potential "catch up" patients i.e. can be managed quickly"
 - "not a problem in general practice but more difficult in an abortion clinic as main focus is the procedure, then future contraception and then STIs; referring GPs should do all this pre operation but mostly don't"
 - "while I know I can take a sexual history audit made me reflect on how often I take a full history"
 - "not sure how to bring it up with patient with a non-sexual health problem"

3. Did the audit enable you to reflect on your ability to test and treat patients with genital chlamydia?

- | | |
|------------------------|----|
| Yes | 26 |
| No | 1 |
| Partly, please explain | 3 |
- "found it easier to test than previously thought as I found cervical and urethral swabs not always needed"
 - "Guidelines suggest a urine PCR must also be done with an ECS PCR in a symptomatic patient. I thought ECS PCR was sufficient"
 - "testing is usually easy and accepted but contacting patients with positive results can be challenging as some may give wrong numbers, switch off mobiles, "go bush" etc"

4. Did the audit enable you to reflect on your ability to ensure that sexual partners of patients with genital chlamydia are traced and undergo medical consultation and chlamydia testing?

Yes	21
No	7
Partly, please explain	3

- "women often want to organise partner contact themselves but I'm never sure it always happens particularly with ex-boyfriends"
- "most of patients prefer a neutral party; they were informed that Health Dept would contact them."

5. Did the audit enable you to reflect on your knowledge of local, regional and state support services, agencies and resources which deal with sexual and reproductive health?

Yes	18
No	12
Partly, please explain	1

- "I already have STI clinics/physicians I can contact as required but don't use them regularly."

6. Did the audit enable you to reflect on your practices with regard to statutory disease notification?

Yes	21
No	9
Partly, please explain	0

7. What are the biggest barriers you have found in managing sexual health issues in this age group?

- raising the issue when patient's presenting complaint is not related especially if parent attending
- getting honest/complete answers from patients and getting them to discuss issues openly; problem with taciturn or monosyllabic patients
- patients' concern about confidentiality
- patients sensitive to 'difficult' questions
- learning to ask questions so as not to seem too 'prying'
- thinking about STI risk in at-risk age groups
- some female patients reluctant to see male GP; older male broaching subject with younger female patients is difficult
- time available
- persuading couples to use condoms and then persuading couples to have chlamydia testing despite lack of symptoms when they have been exposed to unsafe sex practices
- making sure patients attend follow-up after notification
- young people often don't present to GP and when do it is mostly unrelated problem so feels inappropriate to ask about sexual health
- teenagers often attend with parent/guardian who take offence if asked to leave and also if GP asks young person about any sexual activity

- patients in this age group often present with a crisis and with a parent so this first encounter is often a difficult time to initiate a full sexual history taking
- alcohol use negates any safe/sober sexual health choices; often under influence of drugs, mostly alcohol, when having sex so safe sex unlikely
- their refusal to acknowledge that serial monogamy is an STI risk so not taking adequate precautions
- the “I’m invincible” mentality and the “It won’t happen to me” attitude of 15-25 year olds
- peer group pressure in younger ones can sometime lead to premature sexual activity
- client discomfort with physical examination; patients’ perception of invasive procedures
- contact tracing issues; difficult and somewhat inappropriate to get list of contacts before testing then also hard to get patients back for results especially when presumptive treatment has been given
- difficulty of ensuring that patient has contacted partners
- GPs need understanding of cultural differences about getting culture specimens particularly for Aboriginal women

8. How has this audit changed your practice?

- more aware of need to ask specific/direct questions about sexual health and behaviour
- my sexual health history taking now more comprehensive including safe sex promotion, skills in taking sexual history improved
- increased awareness of taking full sexual history; now assess lifestyle risk
- more willing and more likely to include chlamydia screening and safe sex advice to individuals in this group
- ask a lot more questions even of patients in long-term relationships
- trying to include sexual history taking and safe sex promotion in any type of consultation
- now sexual history taking is a more routine part of patient history taking in this age group
- to be more proactive
- will offer screening more to this high risk group with LVS and HSU
- ensure contact tracing
- changed use of urine/ECS PCR
- question what to do when only one test is positive; accuracy very important when patients are ‘surprised’ and there are issues of fidelity
- emphasised need for GP awareness of issues and of risks faced and taken in this age group
- stopped practice staff from advising results on phone to encourage review appointments
- now am far more comfortable in talking to patients about their sexual practices and now do this routinely
- now not only ask patient about their history of STIs and gender of their partner but ask about partner’s history of STIs

9. Do you feel you have achieved the following audit objectives? Yes No

▪ To understand the behaviours which may place young people at risk of chlamydia	30	1
▪ To include a lifestyle risk assessment in all consultations with young people	26	4
▪ To learn to include safe sex education in consultations with young people	28	1
▪ To learn about testing for chlamydia	23	7
▪ To learn about management of chlamydia including partner notification	22	7

10. What remaining goals do you have for managing sexual health in your practice?

- HPV testings and follow up
- develop skills to manage sexual health problems e.g. erectile dysfunction and low libido
- somehow to manage sexual history taking in a very busy GP practice; try to take full sexual history for all patients in all at-risk groups over period of time; continue to take comprehensive sexual histories
- get referring GPs to test patients prior to TOP
- achieve a better setting so that young people gain more confidence to discuss problems
- develop ability to target sexual partners' history and symptoms both current and past
- including it (sexual health) in other non-related consultations
- to increase vigilance and address issues more frequently
- provide safe sex education and opportunistic testing
- improve screening; target 15-25 year olds for screening; may improve opportunistic screening by informing them of prevalence of chlamydia, give printed information and encourage them to return for screening
- have more information (pamphlets, posters) in waiting room
- devote more time to STI prevention in young and homosexual patients; be more proactive in prevention and safe sex
- asking the same questions of my older patients (i.e. 70 years and over)
- better knowledge of contraceptive choices and communicating these to patients
- maintain current changes
- to keep on trying to maintain impetus (from this activity) in face of time constraints
- continue to remain up to date with antibiotic treatment of STIs
- continue to include lifestyle risk assessments in consultations with young people

While the final number of GPs participating in the clinical audit was very small the responses of these GPs showed that for them the experience was very worthwhile.

The responses to Question 9 about young people were encouraging in that the behaviours and needs of young people – the target group of the DoH WA campaign – were seen as important. The need to always or more consistently

take comprehensive sexual histories was identified by many for GPs as one of their goals to better manage sexual health in their practice.

Many of the barriers identified are issues in sexual health management at the practice level that could be taken up with DoH WA, the RACGP or the ACRRM as part of future professional development programs. Others are wider social issues as in the “I’m invincible” mentality and the “It won’t happen to me” attitude of 15-25 year olds or the reluctance of many parents to allow their teenagers to attend medical appointments by themselves.

CHLAMYDIA CLINICAL AUDIT - ACTIVITY EVALUATION

Of the 32 participating GPs 14 were very happy and/or satisfied with all aspects of the audit and made no further comments. The remaining 28 responded in more detail to either all or some aspects of the audit process as detailed below.

How could this clinical audit be improved in terms of:

Enrolment Procedures?

- found it easy to understand and use
- very straightforward
- all my patients very willing when asked to participate
- the most difficult part enrolment always a problem for GPs and patients
- not sure I have any answers but enrolment is a bit cumbersome
- expanding age range would have made it easier to reach required number of patients
- allowing enrolment from all previous/ongoing patient encounters
- age range for audit patients excluded lots of GPs
- widen possible participation by contacting all registered GPs through various medical journals
- how to enrol the unconverted?
- hard to get required number of patients in required time frame in remote country setting
- not much time to get the 20 patients
- if using retrospective patients hard to get the informed consent forms signed and returned
- completion rates may have been higher if study had been described in a bit more detail at the expression of interest stage
- perhaps a simple, brief outline of objectives of audit/study be included on consent form

Form Design?

- good to be on 1 A4 piece of paper, ideal for the 'GP Desk'
- flowed sequentially
- didn't allow for history obtained at any stage only at consultation i.e. may already be familiar with patient's preferred gender
- need to make it immediately obvious which questions are for patients that test positive and those which don't
- very upfront; I often take 2-3 consultations to get more comfortable (and they with me) before I ask more personal questions
- some question a bit confusing e.g. some of information about past infections had been collected at other consultations. I didn't know if all questions related to consultation of that day
- too many questions and tends to be a bit vague

Data Collection?

- longer time frame needed
- patients not offended by questions
- summary sheet for audited patients be useful; need to follow up once results are tested
- as part-time doctor did audit retrospectively which probably reflected my practice better than doing audit prospectively where I would have to be more honest
- not always able to answer all questions sometimes by looking at patients past notes
- retrospective collection was good, just took last 20 patients of right age although couldn't record length of consultation time
- not always able to collect the results of chlamydia testing in time
- patient questionnaire may have been helpful
- larger sample group of GPs would help as 32 completed audits is a very small sample group, these 32 GPs may already have an interest in sexual health
- perhaps under genital exams have subheading limited examination as full examination may not be appropriate especially with male patient and female doctor and vice versa

Anything else?

- "a very well organised clinical audit which was relevant to practice and very simple and easy to use
- good learning process
- would be good to get percentage of chlamydia in different parts of the state
- study design did not reflect usual practice
- questionnaire need to be filled in several sessions; testing, results and counselling
- with no patient name on form it was hard to match questionnaires to patient I needed study notes
- was low return rate due to inability to capture positive chlamydia results
- feel aim of exercise should be to increasing GPs awareness of chlamydia not just getting positive results to participate
- could have included GC as this disease is around and may have been present in some patients who tested positive for chlamydia
- I am none the wiser about the 5 patients with urethral discharge but negative for GC and chlamydia who got better after treatment for chlamydia.
- good to get the feedback

CHLAMYDIA CLINICAL AUDIT - REPORT ON AUDIT DATA

Q1. Patient's Age

The age of patients whose cases were recorded ranged from 14 to 74 years.

Age in Target Group	%
15	6.1
16	4.9
17	6.3
18	8.6
19	10.0
20	9.5
21	9.9
22	7.9
23	11.3
24	9.7
25	9.5

There were more 23 (11.3%) and 19 year olds (10%). Less than 10% were in the other ages with 16 year olds (4.9%) the smallest group.

Age out of Target Group	%
14	0.2
26-29	4.0
30-38	2.8
40-49	2.6
52-56	0.2
74	0.2

Q2. Patient's Gender

Of the audited patients 64% were female and 24% were males. The gender of the other 12% was not recorded.

Q3. Does patient identify as being Aboriginal or Torres Strait Islander?

Of all audited patients 6.7% identified as being Aboriginal or Torres Strait Islander and 75.7% did not. Approximately 18% of the audits did not record an answer.

Q4. Did you ask this patient:

Question	Yes	No	No record
Do you smoke?	75.9%	22.1%	2.0%
Do you drink alcohol?	70.8%	25.6%	3.6%
Do you take drugs?	59.9%	35.2%	4.9%
Have you ever been sexually active?	86.0%	12.4%	1.6%

This question was included to remind GPs to undertake lifestyle risk assessments of patients in the targeted age range and to alert them to the overlap of risk factors in sexual health matters. GPs appeared more reluctant to ask about drug taking than the other health risk behaviours.

5. If the patient is sexually active, did you ask about:

	Yes	No	No record
Condom use	77.2%	21.4%	1.3%
Past history of STIs	68.9%	28.1%	3.1%
Their own current STI symptoms	74.0%	24.3%	1.7%
Number of sexual partners in the past 12 months	55.9%	41.6%	2.5%
Use of condoms with each sexual partner	54.3%	42.4%	3.3%
Past history of STIs in sexual partner(s)	38.3%	57.6%	4.0%
Current symptoms of STI in partners	44.7%	52.6%	2.7%
Gender of sexual partners	52.7%	44.4%	2.9%

This question was designed to encourage GPs to undertake comprehensive sexual histories of their patients in the targeted age range.

Clearly GPs were most comfortable asking about condom use and if patients currently have STI symptoms as these questions were asked by 75% of respondents. Well under half asked about past history of STIs in sexual partners and current STI symptoms in partners.

6. Did you offer testing for chlamydia?

Approximately two-thirds of GPs offered testing, almost all of the remainder did not, with the exception of one GP who did not record this information.

7. If not, what were the reason/s? (Tick all that apply)

	%
Patient is not currently sexually active	9.4
Patient in a long-term monogamous relationship	96.4
Nature of patient's presenting problem made it inappropriate to talk about sexual health or offer chlamydia testing	98.7
I did not feel comfortable to talk about sexual health/offer chlamydia testing to this patient	2.7
I referred patient elsewhere	0.6
Other	8.3

It is interesting to note that overwhelmingly GPs see that patients in long term relationships are not at risk of chlamydia infection or presumably of any other STI. This is most likely due to untested assumptions about trust between partners precluding sexual activity outside of the relationship.

8. If you did not offer testing, did you use the opportunity to promote safe sex?

Of the participating GPs 44.2% used the consultation as an opportunity to promote safe sex, 48.4% didn't and 7.4% had no record.

9. If you did offer testing, what were the clinical indications for offering the test? (Tick all that apply)

Patient aged 15-25 years	36.9%
Patient has had unprotected sex	26.9%
Patient has changed partners in the last 12 months	15.6%
Patient has had >1 partner in the last 12 months	11.0%
Patient requested chlamydia/STI or sexual health check-up	19.6%
Patient has STI symptoms	12.4%
Patient's partner has STI/STI symptoms	6.0%
Test done as part of a Pap smear or well women's check-up	12.1%
Test done as part of an antenatal check-up	0.7%
Test done as part of an infertility investigation	5.7%
Other (specify)	22.0%

10. If you did offer testing, was the patient tested?

When GPs offered chlamydia testing 47.3% of patients were tested, 8.6% chose not to be tested and for 14.7% of patients there were no records.

Patients who chose not to be tested at the consultation which was audited offered the following reasons:

- " ... already been tested at Family Planning WA"
- " ... recent test elsewhere"
- prefer to come back or to see their own GP
- "I am married", or "I am married with children" or "I am in a monogamous relationship" or "I use condoms"
- no symptoms, insisted were "clean"
- not sexually active
- mother present
- " ... don't want to"

11. What test for chlamydia was done? (Tick all that apply)

First void urine for nucleic acid testing, e.g. PCR	34.9%
Mid-stream urine for nucleic acid testing, e.g. PCR	1.1%
Mid-stream urine for microscopy and culture	1.7%
Self-obtained lower vaginal swab for nucleic acid testing, e.g. PCR	1.3%
Practitioner-obtained lower vaginal swab for nucleic acid testing	0.7%
Practitioner-obtained high vaginal swab for microscopy and culture	5.1%
Practitioner-obtained endo-cervical swab for nucleic acid testing	18.6%
Practitioner-obtained endo-cervical swab for microscopy and culture	5.7%
Urethral swab for nucleic acid testing, e.g. PCR	2.7%
Urethral swab for smear and culture	1.3%
Blood test for Chlamydia	0.0%
Other specify	1.0%

12. Did patient return for results?

Of the cases audited by the participating GPs 60.2% of their patients returned for results; 24.7% did not and in 14.8 % of cases there was no record.

If not, how did you inform the patient of their results?

Most patients were informed of their results by letter or by phone. A small number of patients received these at a follow up appointment. In some cases it the practice nurse who phoned the patient in other cases the GP phoned the patient with their results.

13. If the test result was negative, did you use the opportunity to promote safe sex to the patient?

Seventy-one percent of GPs replied that they used this opportunity to promote safe sex to their patient while 29.9% answered in the negative.

14. If the test result was positive did you:

	Yes	No
Take a full sexual history?	71.3%	25.5%
Perform a genital examination (including speculum exam in females)?	54.3%	42.4%
Offer testing for other STIs as clinically indicated? (see list of STIs below)	86.9%	13.1%
Treat (see list of medication below)	97.9%	2.1%
Did you tell patient to avoid sex or practice safe sex during the first week after treatment?	85.6%	13.4%
Did you use the opportunity to promote safe sex?	94.9%	4.1%
Did you explain to patient about the window period for syphilis, Hepatitis B and HIV?	81.6%	14.35%
Did you initiate partner notification of sexual partners by:		
o patient agreeing to notify his/her contacts?	92.2%	3.3%
o notifying patient's contacts yourself ?	11.8%	68.6%
o giving list of contacts to disease control nurse at local Population Health Unit ?	52.5%	39.9%
o other method?	23.9%	54.3%
Did you ask the patient to return for review after 3 months?	76.8%	21.1%
Did you complete a statutory disease notification form for the patient?	94.8%	3.1%

Offered testing for other STIs:

GPs offered their patients tests for Gonorrhoea, Hepatitis B and C; HIV, Syphilis and Venereal Diseases Research Laboratories (VDRL).

Medication prescribed

GPs prescribed azithromycin, ceftriaxone, doxycycline, vibramycin and zithromax.

15. Approximately how long did the initial consultation take?

Consultation time in minutes	Number	% of audits
00-05	16	2.8
06-10	117	20.5
11-15	193	34.0
16-20	123	21.7
>20	118	20.9

The times recorded for the initial consultation ranged from 2 to 75 minutes with 34% of GPs recording consultations of between 11 and 15 minutes.

5. CHLAMYDIA TESTING RATES BY WA GPs: RESULTS FROM HEALTH INSURANCE COMMISSION DATA

The Chlamydia Campaign aimed to increase chlamydia testing among young people aged 15-24 years in WA. However, measuring chlamydia testing by individual GPs would have been a lengthy and costly undertaking.

Two methods were used to ascertain whether the campaign had an impact:

1. Examination of the chlamydia notifications during 2005 to see whether they increased around the time of the campaign
2. Examination of the overall number of chlamydia tests carried out by GPs in WA during 2005.

Figures 1a to c show WA chlamydia notifications for 2005. Figure 1a shows that there was a rise in chlamydia notifications during the course of the campaign. While the trend is evident for female notifications, it is less evident for males. Figure 1b clearly indicates increasing notifications in urban regions over the course of the campaign, but shows virtually no change in notifications throughout the year in rural and remote regions. The success of the campaign in targeting 15-24 year olds is evident in Figure 1c, which shows a clear increase in notifications for this age group during the campaign.

The Health Insurance Commission provided data on the number of Medicare claims for two particular services which indicated that the chlamydia campaign had had an impact on GPs' testing rates.

The two Medicare Item Numbers of relevance in attempting to assess the volume of chlamydia tests performed in a given period were:

- **Item 69369** - detection of chlamydia by any method using specimens taken from one or more sites.
- **Item 69370** - detection of chlamydia or gonorrhoea by nucleic acid amplification techniques in one or more sites.

Figure 1: Chlamydia notifications by gender, location and age.

Figure 1a. Chlamydia notifications by gender, WA 2005

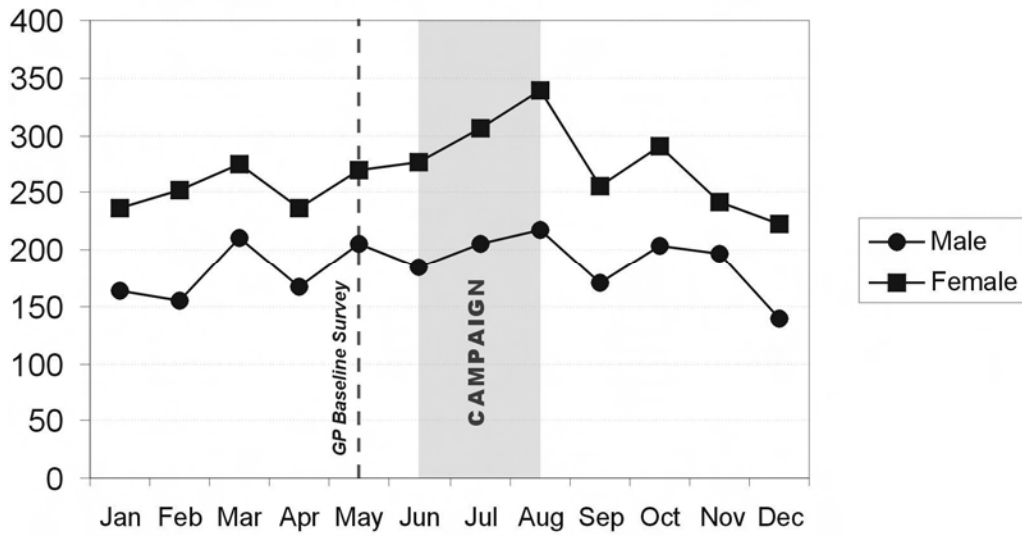


Figure 1b. Chlamydia notifications by location, WA 2005

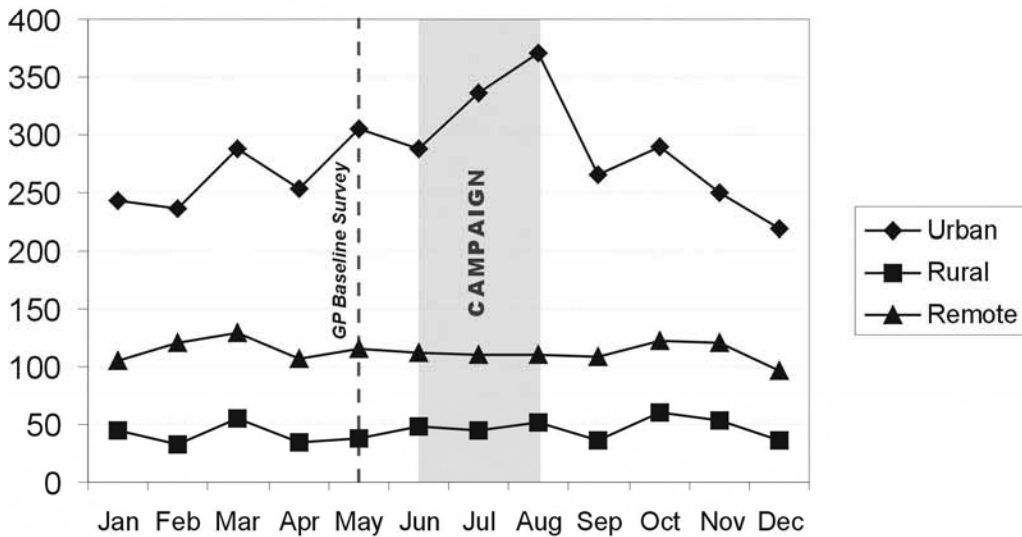
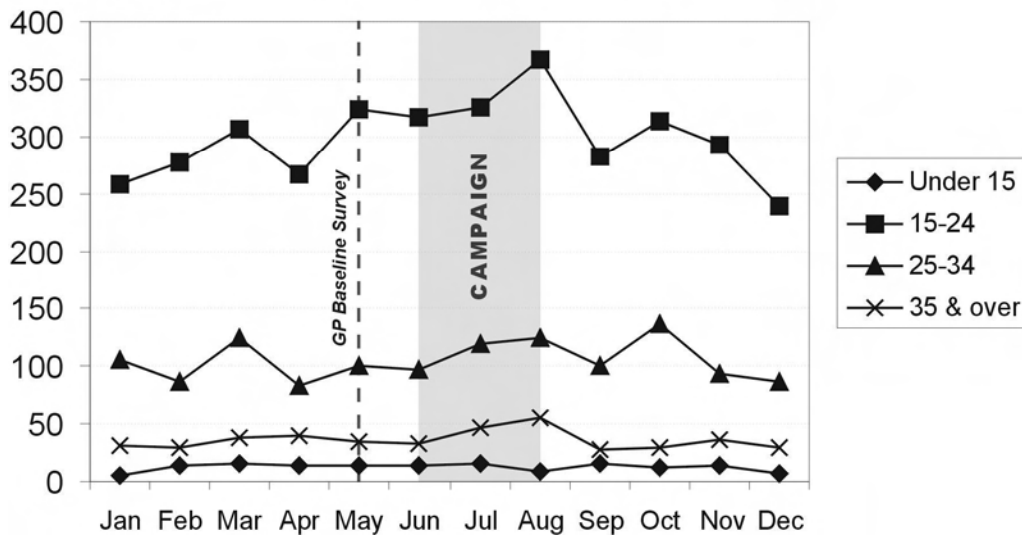
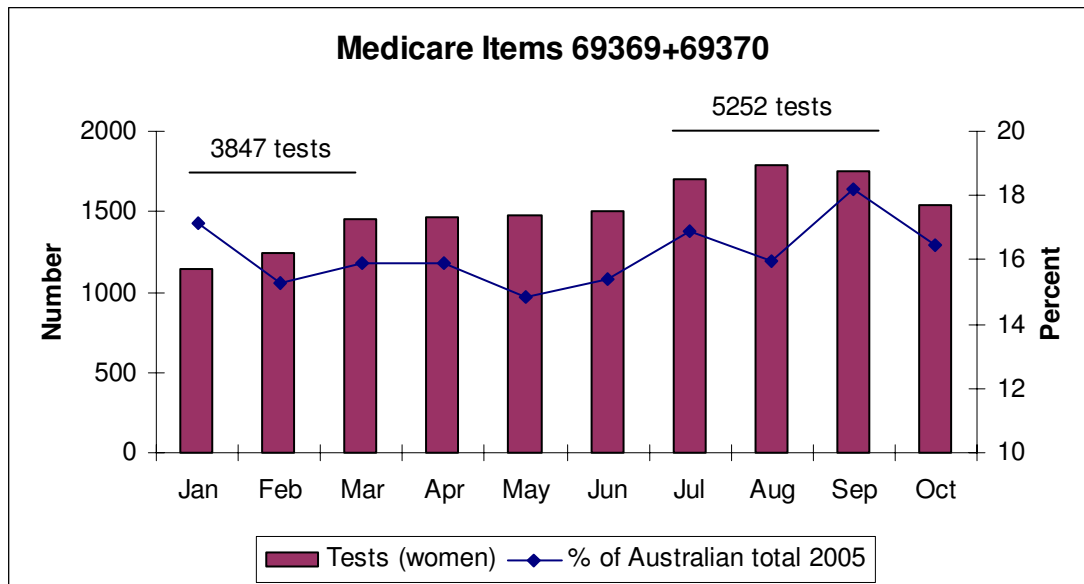


Figure 1c. Chlamydia notifications by age, WA 2005



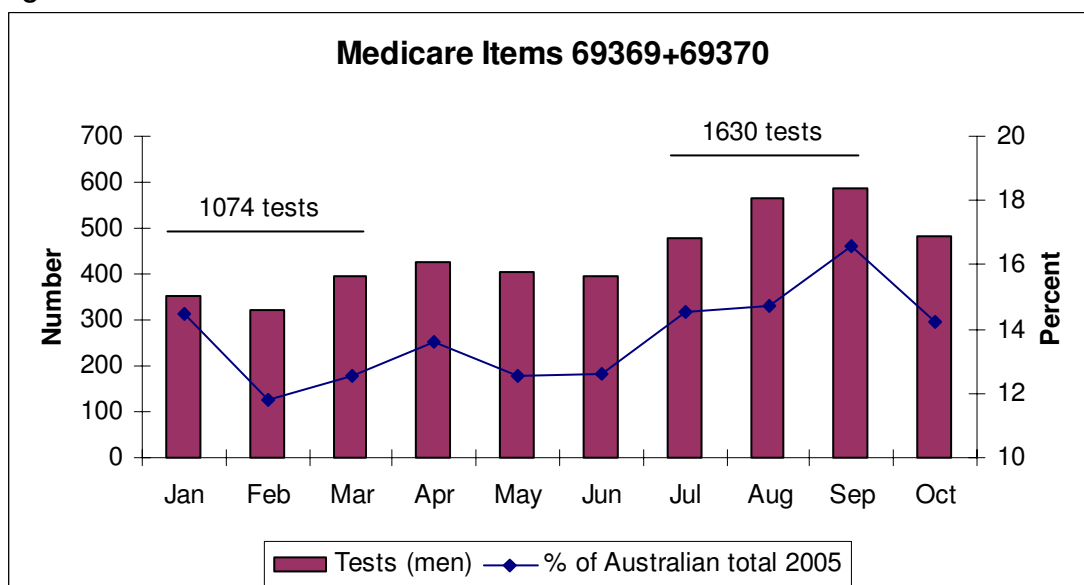
The Chlamydia Campaign itself was launched in June, and the GP intervention commenced in May. Data relating to female patients was therefore examined from the first quarter of 2005, and shows that for the first three months of the year, 3847 claims for these item numbers were made (Figure 2a). This contrasts to the quarter (July to September) directly following the campaign when well over 5000 claims were made for these items, suggesting that the campaign did result in increased testing.

Figure 2a Medicare Items 69369 and 69370 for women



The effect of the campaign was slightly less marked for men, for whom a much lower rate of testing is generally recorded. Figure 2b shows that in the first quarter just over 1000 claims were made for these tests, in comparison to 1630 in the quarter following the campaign.

Figure 2b Medicare Items 69369 and 69370 for men



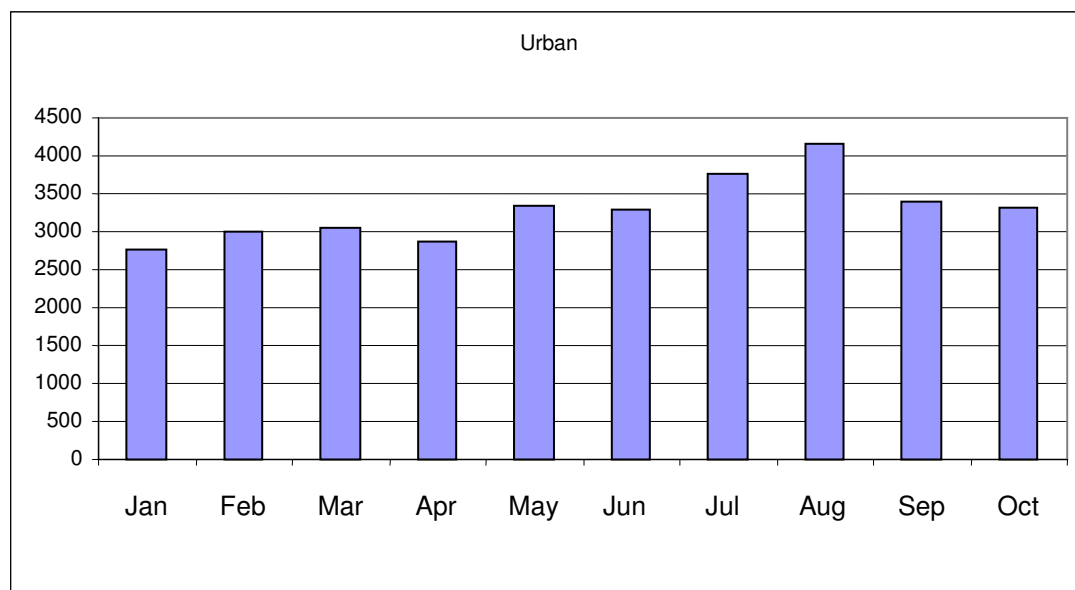
Both Figures 2a and 2b suggest that the chlamydia campaign had an impact on the community. For both males and females the number of tests performed in WA in July, August and September was higher than the number performed

in January, February and March. The number of tests performed as a percentage of the total number of tests performed Australia-wide also increased, demonstrating that the WA increase was not simply part of a more general national increase in testing over those months.

Figures 3a to 3c show the number of tests performed for the same Medicare Item numbers 69369 (detection of chlamydia by any method using specimens taken from one or more sites) and 69370 (detection of chlamydia or gonorrhoea by nucleic acid amplification techniques in one or more sites) by doctors in three different locations – urban, rural and remote. The graphs presented below finish at the end of October because on 1 November 2005 these item numbers were removed from the Medicare rebate list.

It is clear from comparison of all three graphs that the vast majority of testing is carried out in urban areas, where well over 2500 tests were conducted each month in comparison to well under 1000 per month in rural and remote areas. It is evident from Figure 3a that there was a marked increase in testing in urban areas shortly after the commencement of the Chlamydia Campaign in July to September (11 322) in comparison to the first three months of the year (8820).

Figure 3a: Number of tests for Items 69369 and 69370 requested in urban areas of WA from January to October 2005



While increased testing is not so obvious in Figures 3b and 3c, comparisons of test numbers for the period July to September with the period January to March, suggest a modest increase:

Rural areas:	Jan-March 1752 tests	July-Sept	2060 tests.
Remote areas:	Jan-March 1938 tests	July-Sept	2225 tests.

Figure 3b: Number of tests for Items 69369 and 69370 requested in rural areas of WA from January to October 2005

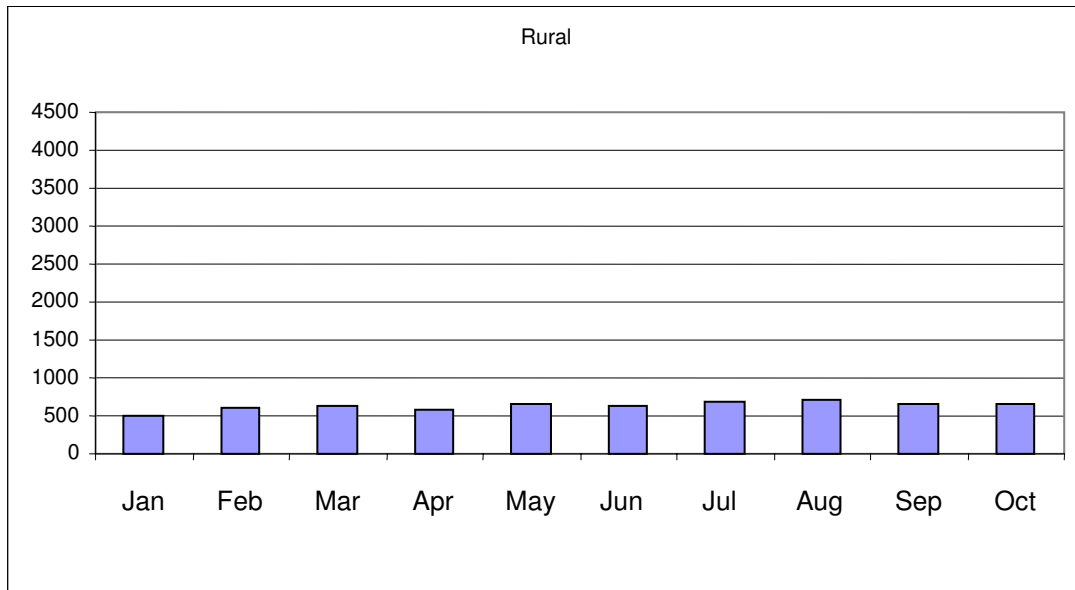
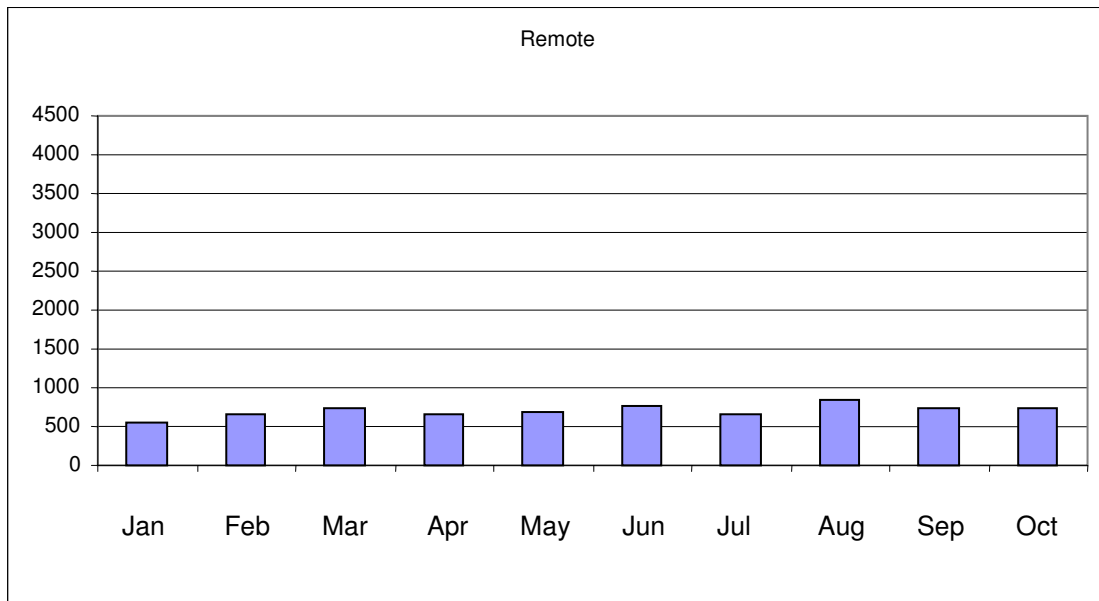


Figure 3c: Number of tests for Items 69369 and 69370 requested in remote areas of WA from January to October 2005



Figures 4a-d show the number of tests performed for Medicare Items 69369 (detection of chlamydia by any method using specimens taken from one or more sites) and 69370 (detection of chlamydia or gonorrhoea by nucleic acid amplification techniques in one or more sites) by different age groups. Once again, the graphs below finish at the end of October because on 1 November 2005 these item numbers were removed from the Medicare rebate list.

In preparing these diagrams the data for the age groups of 0-14 and 55-85 years were too small to be included in analysis. It can be seen that there was a clear increase in the number of tests for both males and females of 15-24 years, but particularly for females, during the campaign period. Figure 4b

suggests the campaign had a slight effect in the 25-34 year old age groups. There is no evidence of an effect for older age groups.

Figure 4a: Number of tests for Items 69369 and 69370 for women and men between ages of 15 to 24 in WA

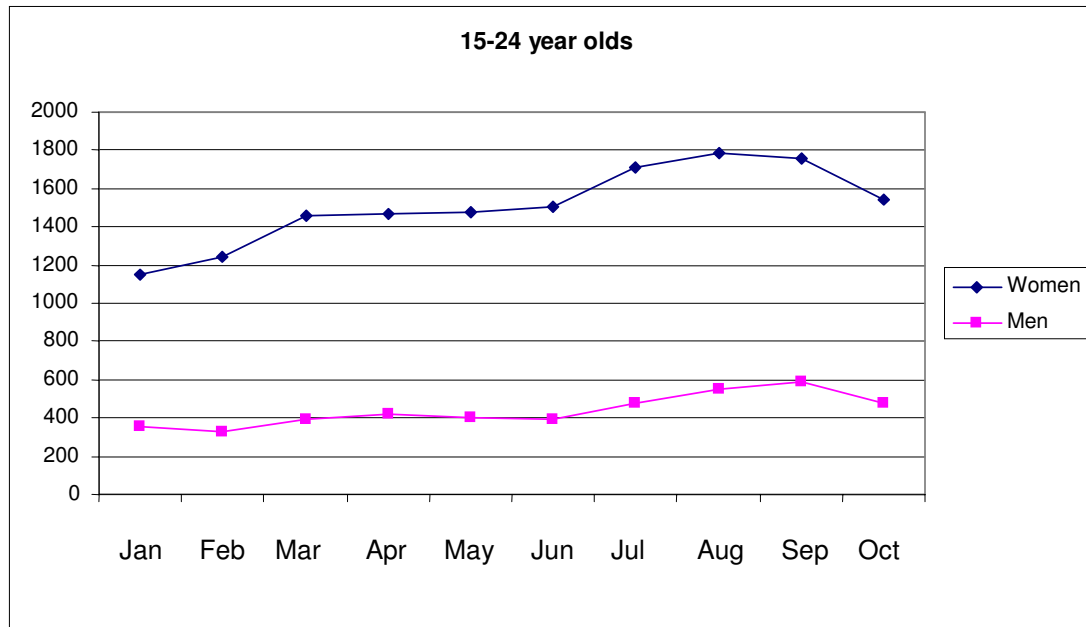


Figure 4b: Number of tests for Items 69369 and 69370 for women and men between ages of 25 to 34 in WA

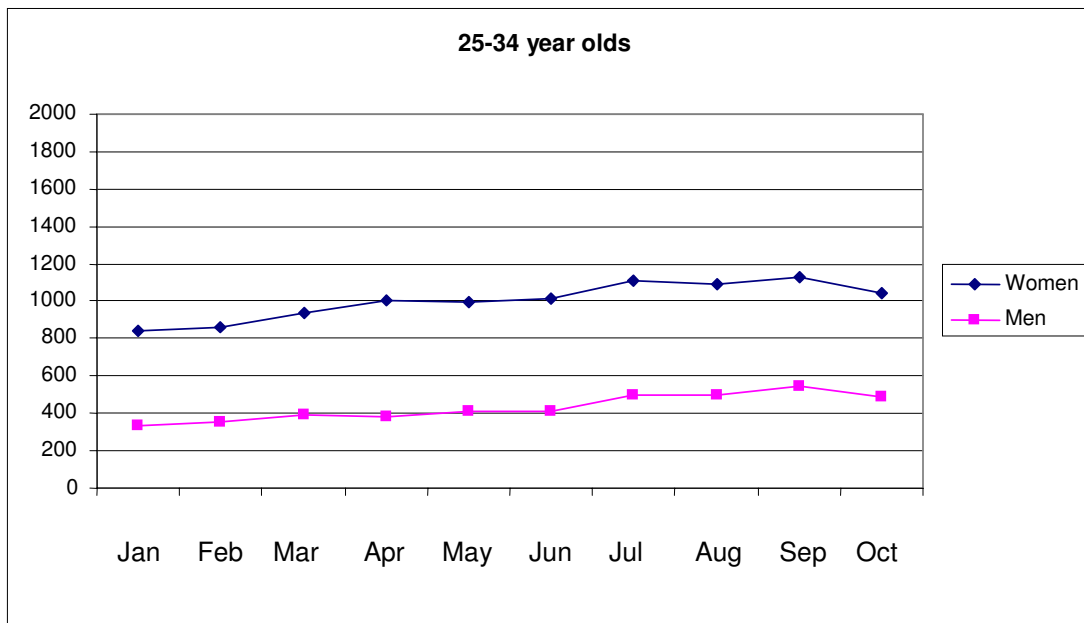


Figure 4c: Number of tests for Items 69369 and 69370 for women and men between ages of 35 to 44 in WA

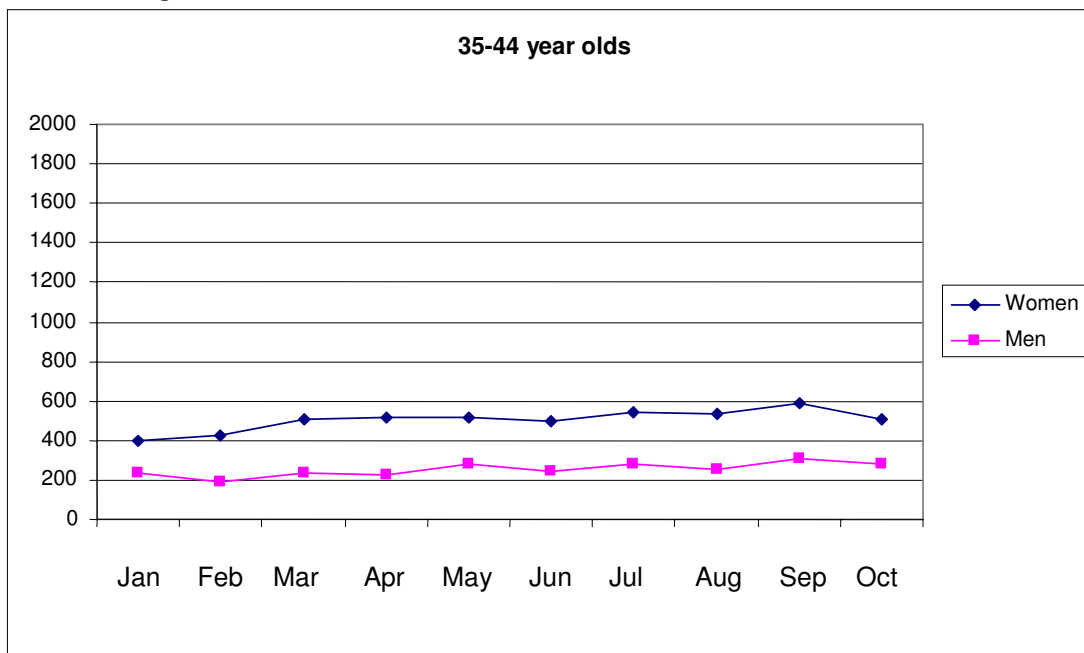
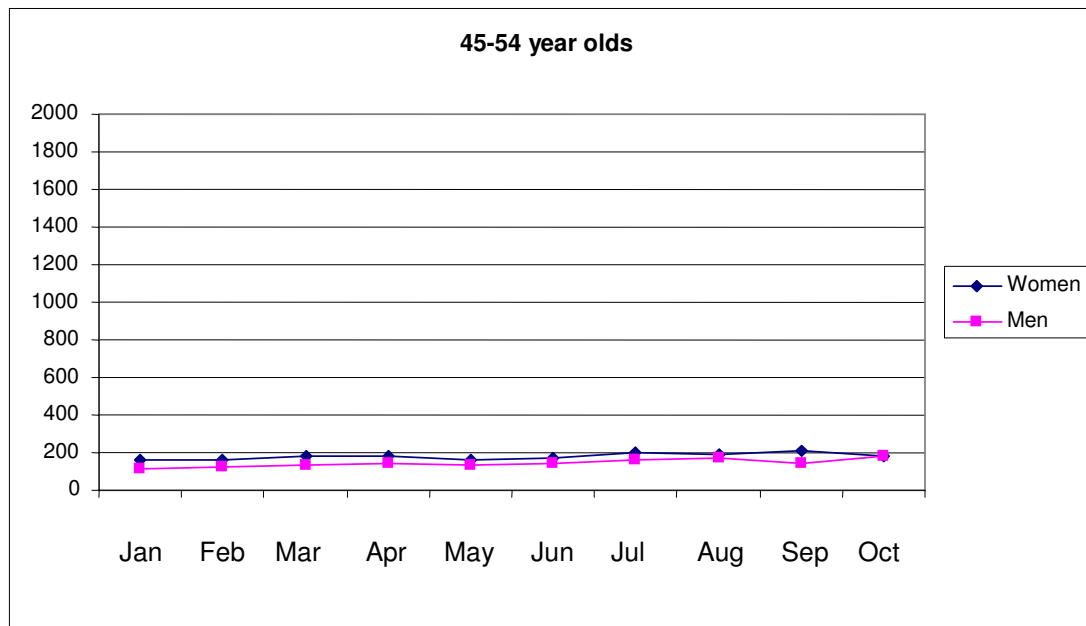


Figure 4d: Number of tests for Items 69369 and 69370 for women and men between ages of 45 to 54 in WA



Population estimates for Western Australia show there are 147 679 men and 139 443 women aged between 15 and 24 years. Using the June tests as a measure of baseline activity suggests that the campaign resulted in 3751 additional tests for women and 1223 additional tests for men in this age range. This is an additional 2.7% of women tested and 0.8% of men in this age group.

6. DISCUSSION

Chlamydia rates in WA have increased four-fold in the last ten years. In response to this DoH WA undertook the public campaign entitled *Chlamydia*: most people haven't got a clue. This campaign had two aims: to increase the number of young people requesting a chlamydia test and to improve GPs' knowledge and skills in relation to chlamydia testing and clinical management of chlamydia. The Australian Research Centre in Sex, Health and Society (ARCSHS) was contracted to assist with the second aim, by predisposing GPs to the educational material distributed as part of the campaign.

A survey to elicit information about GPs chlamydia knowledge and practices was sent to all GPs in WA. Of the 2038 questionnaires sent, 564 (27.6%) were used in analysis. Given the content of the questionnaire, and the competing demands for GP time to be involved in other research which may appear to them to be more relevant to their patient caseload, this was a satisfactory result.

Who completed the questionnaire?

Marginally more males (51%) than female (48%) GPs completed the questionnaire. Over half of the respondents were in the 35-54 year age group, with almost one-fifth in the 55-64 year age group. There were slightly more respondents (11%) in the 25 to 34 year age group than in the over 65 year age-group (8%). Almost three-quarters of the GPs responding to the questionnaire practiced in urban areas. Almost two-thirds of respondents had been working in general practice for 10-29 years, with 21% having worked for 0-9 years.

About 50% of the respondents stated that their patient caseload included 10-25% of young people aged 15-24 years, with a further 19% seeing a higher percentage of 15-24 year olds in their practice. Many of the GPs who completed the questionnaire were involved in regular sexual health consultations such as offering contraceptive advice (56% daily; 35% weekly) Pap smears (52% daily, 30% weekly) and safe sex advice (30% daily; 43% weekly). GP respondents diagnosed STIs regularly (20% weekly; 45% monthly) and recommended STI tests to asymptomatic 'at-risk' patients (15% daily, 32% weekly and 25% monthly). It is likely therefore that the questionnaire was returned by GPs with at least some interest in sexual health.

In the 4 weeks prior to receiving the questionnaire, respondents diagnosed 266 cases of chlamydia; of which 75% were in urban practices.

Sexual risk assessment

It was pleasing to see that many GPs were aware of the need to ask patients at risk of STIs, appropriate questions about their sexual behaviour. Respondents commonly or very commonly asked about safe sex (81%), having more than one sex partner (66%) and injecting drug use (65%). However fewer GPs asked about the important risk factors of overseas travel (54%) or sex with sex workers (30%).

GPs were asked whether they would be likely to take or update a sexual history in five different clinical situations. Nearly all GPs would take a sexual history from a man presenting as the sexual contact of an infected partner, and around half would do so for a female patient requesting a Pap smear. However, only 39% would do so for a 24 year old woman routinely presenting for the contraceptive pill, and less than a third would do so for a male patient requesting overseas immunisation advice or a young male with a new sexual partner. GPs were also asked how embarrassed a patient would be if they took a sexual history in these situations. Two-thirds of respondents thought the young male sexual contact of an infected partner would not be embarrassed. However, around half of the respondents believed the young female patients presenting for a Pap smear and contraception would be embarrassed, even though both of these presentations are opportunities for sexual risk assessment which would be perfectly obvious to the patient.

There was a clear gender bias in terms of sexual risk assessment with fewer female than male GPs believing that the female patients would be embarrassed if they were to take or update a sexual history. Similarly fewer male than female GPs believed that the male patients would be embarrassed if they were to take or update a sexual history. Despite this however, female GPs were more likely to actually take or update a sexual history.

GPs were asked how they would rate the likelihood of them recommending a chlamydia test in the five different clinical situations offered. While the majority (96% of female GPs and 93% of male GPs) would do so for the young male presenting as the sexual contact of someone with an STI, it is surprising that not 100% would recommend this. Female GPs were more likely than males to recommend chlamydia testing for the female patients requesting contraception (37% vs. 14%) and a Pap smear (71% vs. 30%).

Respondents agreed that there were a number of barriers to taking a sexual history. First consultation, the presence of a third party, knowledge of a patient outside of the surgery and issues of language and culture were commonly seen as barriers to GPs taking a sexual history.

For patients presenting with symptoms of an STI, most GPs (87%) would commonly ask about a previous history of STIs, and around 65% would ask about injecting drug use and recent overseas travel. However, just over half would commonly ask about specific sexual practices; information which is critical to ensuring that testing is performed correctly.

Knowledge of chlamydia

Chlamydia is most commonly seen in WA and nationally in the 15-19 year and the 20-24 year age-groups. Whilst 76% of respondents were aware that chlamydia was most commonly seen in the older group, less than half (45%) of GPs were aware of this in the younger group. About 30% of respondents wrongly believed that chlamydia is most commonly seen in the 25-29 year old age group.

GPs seemed to be more confident of the symptoms of chlamydia in male than female patients, with around 85% correctly identifying painful urination or urethral discharge as symptoms, whilst painful urination, vaginal discharge

and pelvic pain was identified by 71%, 76% and 68% of respondents as symptoms in women. Of some concern are the respondents who answered that a common mode of presentation for chlamydia in females (7% or 41 GPs) and males (6% or 35 GPs) is a genital ulcer or lump.

Testing for chlamydia

The most common reasons given for recommending testing for chlamydia in asymptomatic patients were where a patient's partner had received an STI diagnosis or where there had been a history of unprotected sex. GPs were asked which tests they would use to test an asymptomatic patient for chlamydia. First void urine for PCR testing was the test of choice for both female (91%) and male (95%) patients. Knowledge of self-obtained lower vaginal swabs for chlamydia testing of **asymptomatic** females was low (7%), particularly in urban (4%) compared with remote (28%) and rural (48%) areas. First void PCR urine testing was also the test of choice for males with a non-purulent urethral discharge (91%). For females with vaginal discharge and females with suspected PID both first void urine PCR (76%, 77%) and practitioner-obtained endo-cervical swab for PCR testing (76%, 79%) were common.

Treatment for chlamydia

Presumptive treatment was reasonably common for a patient with suspected chlamydia. Forty-six percent of respondents would always or mostly treat presumptively and a further 34% would sometimes do so. Younger GPs were more likely than older GPs to treat presumptively. Confirmatory tests were almost always done under these circumstances.

For a patient in whom chlamydia had been diagnosed, 86% of respondents stated they would generally prescribe azithromycin; 37% had used doxycycline. Well over 90% of GPs knew that azithromycin is an effective single dose treatment for chlamydia.

Public health responsibilities

Almost all GPs knew that chlamydia is a notifiable infection in WA; however, only 85% stated that they would always complete a notification form. The variable levels of knowledge in relation to notification of other STIs demonstrate that public health issues are not the highest priority for most GPs.

With the exception of donovanosis and chancroid, over 90% of GPs knew which STIs are notifiable in WA. GPs need to be better informed about chancroid and donovanosis so that they can respond to them as well as they do to the other notifiable infections. Chancroid and donovanosis are rarely seen so it is not surprising that many GPs were not aware that these are notifiable infections. However as donovanosis, in particular, has not been eradicated from rural and remote communities it is important that GPs are aware that it is a notifiable infection.

Contact tracing practices were variable, with less than 25% of GPs considering this to be always or mostly their responsibility. In fact, in a patient in whom respondents had diagnosed a laboratory confirmed STI, only 60% would commonly ask details of sex partner for contact tracing purposes. Given

that the GPs who completed the baseline questionnaires were most likely to be interested in sexual health issues it is clear that levels of GP knowledge will need to be addressed. Notification and contact tracing responsibilities are both issues that DoH WA should address.

GP resources

The Guidelines for managing Sexually Transmitted Infections, A Guide for Primary Health Care Providers (61%) and the Antibiotic Guidelines (67%) were commonly used by GP respondents, and a wide variety of other print, electronic and human reference sources was also offered as being useful to GPs when managing patients with STIs.

Many GPs completing the questionnaire took the time to offer personal perspectives on their practices and broader sexual health issues in the final question which asked for further comments. Of the total of 564 GPs who completed the questionnaire of Chlamydia and Sexual Health, 296 (52.4%) expressed an interest in participating in the clinical audit.

Objective measures of increased chlamydia testing

The Health Insurance Commission data indicated that in the two months following the campaign, there was both an increased number of Medicare claims for items relating to chlamydia testing as well as an increase in chlamydia notifications. This suggests that the campaign had a beneficial effect on GPs' practices in relation to chlamydia risk assessment and testing. More detailed analysis showed that the campaign was most effective for young women aged 15-24 years who resided in urban areas.

RECOMMENDATIONS

Many GPs commented on the value of public health programs, such as the *Chlamydia Campaign*, and the need for these to be conducted regularly. Raising awareness was seen to be a good way of empowering patients to ask their GPs about specific health issues.

Strategies to implement these recommendations will need to be developed within the context of the feedback offered by many GPs about their substantial workloads and their feeling of being overwhelmed by the wide range of diseases and the health conditions of their patients. In addition GPs are expected to participate in national and state health promoting initiatives and campaigns. The strategies which are most likely to be accepted are those which are practical.

The recommendations arising from this study are broadly grouped under the headings of *Knowledge, Skills and Practice* and *Sexual Health Strategy*.

KNOWLEDGE

Knowledge of DoH WA

A number of GPs were unaware of DoH WA Guidelines and where to access them. Health guidelines play an important role in supporting best practice. It is essential for all GPs to know of their existence and how to access them.

Recommendation 1

- Promotion of the DoH WA website in a wide range of professional associations/organisations and journals.

Knowledge of Public Health Responsibilities

Issues around the public health duties associated with positive STI testing, such as notification and contact tracing, are of particular concern as all GPs are not meeting the expectations of DoH WA. Indeed many of them do not see the benefit of these obligations. While almost all GP respondents knew that chlamydia is a notifiable infection only 85% of GPs would always complete the required notification form.

Recommendation 2

- Improve levels of GP knowledge about their legal requirement to notify DoH WA of diseases gazetted under *Health Act 1911*.

Less than 25% of GPs considered contact tracing to always or mostly be their responsibility. Many GPs believed that contact tracing is the statutory responsibility of DoH WA. Some GPs used their local Population Health Unit for contact tracing but were concerned that they did not always get feedback to confirm that tracing had been done. Only 60% of GPs would ask a patient with a laboratory confirmed STI for details of a sex partner or partners for contact tracing.

Recommendation 3

- Work with GPs, as primary care providers, to encourage higher rates of contact tracing.
- Work with RACGP WA and WACRRM to promote the public health responsibilities of GPs with regard to contact tracing.
- DoH WA should invest in contact tracing services to support GPs to follow up index and named contacts.

SKILLS AND PRACTICE

Many GPs were concerned about their inability to take sexual histories and others wanted to improve or maintain their skills in sexual history talking. Many GPs expressed their lack of confidence in undertaking chlamydia and other STI risk assessments. Similarly GPs felt they lacked the skills to ask questions without being intrusive and to effectively manage a range of sexual health problems. Many GPs wanted to improve their rates of screening.

Recommendation 4

- Work with RACGP WA and WACRRM to develop appropriate skills-based education programs.
- Develop a check list so that GPs can monitor their own practice and respond to shortfalls in practice.
- DoH WA and GPs should work together to implement the RACGP Red Book recommendations for chlamydia screening.

SEXUAL HEALTH STRATEGY

Just under a third of the GP population in WA returned the initial survey of chlamydia related knowledge and practice which preceded the Chlamydia Campaign. Improving the knowledge of these GPs, who are likely to have at least some interest in either sexual health or in young people or both, is an important step in improving not only their chlamydia risk assessment skills but their sexual health assessment skills more generally. Many GPs felt that the intervention (*Chlamydia and Sexual Health* questionnaire, and *Chlamydia Campaign* testing materials), was of benefit to them. In addition to the many positive comments made on the questionnaire, a number of GPs also chose to proceed to the clinical audit offered by ARCSHS.

Finally, the Health Insurance Commission data demonstrated a short-lived but definite increase in the number of chlamydia tests in WA immediately after the campaign.

Further social marketing of sexual health issues will reinforce and augment the effects of the Chlamydia Campaign. However it is essential that evaluation for long-term outcomes in relation to testing and notification be built into such endeavours. In order to ensure both the focus and the success of such marketing, it would be beneficial for these to be developed within an overarching framework of sexual health and STI management education for GPs.

Recommendation 5

- DoH WA should develop a long term strategy for sexual health and STI management education for GPs.
- Periodic sexual health social marketing should be continued, but for prolonged periods. Evaluation for sustained STI testing and changes to notification rates is essential.
- Specific and targeted social marketing strategies must be developed to meet the needs of rural and remote populations as evidenced by the lack of impact of the campaign in testing or notifications.

7. APPENDICES

- 1. Baseline Questionnaire**
- 1. Chlamydia Clinical Audit**
 - 2.1 Pre Audit Questionnaire**
 - 2.2 Data Collection Form**
 - 2.3 Data Feedback Document**
 - 2.4 GP's Reflection on the Data**
 - 2.5 Activity Evaluation**
- 2. Website Resources for GPs**
- 4. References**

APPENDIX 1 - Baseline Questionnaire

CHLAMYDIA AND SEXUAL HEALTH

QUESTIONNAIRE FOR GENERAL PRACTITIONERS

Gold standard answers will be returned to all participants

Completed questionnaires will be entered into a draw for a case of red wine (see back page for details)

- *These questions will take approximately 10 minutes to complete.*
- *Please return the questionnaire by fax or mail, and GOLD STANDARD answers will be faxed to you.*
- *Summary results may be published; however no individual or practice will be identifiable.*
- *You are free to withdraw your participation at any time.*

If you have any questions about this project, please contact either:

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A research study by: **The Australian Research Centre in Sex, Health and Society
La Trobe University and Western Australian Department of Health**

This project has ethics approval from the La Trobe University Human Ethics Committee.

CHLAMYDIA MOST PEOPLE HAVEN'T GOT A CLUE.



A. CLINICAL FEATURES

Sexual history taking is a sensitive area of general practice that involves finding out from patients about behaviours that may put them at risk of acquiring a Sexually Transmissible Infection (STI).

1. For a patient who you consider may be at risk of acquiring an STI, how common is it for you to ask about these behaviours?

		Please circle appropriate answer				
		Very common				Not at all common
		1	2	3	4	5
A	Having safe sex	1	2	3	4	5
B	Having more than one sex partner	1	2	3	4	5
C	Having sex with sex workers	1	2	3	4	5
D	Recent overseas travel	1	2	3	4	5
E	Injecting drug use	1	2	3	4	5

2. For the following patient presentations (assume they are regular patients of your practice), how would you rate the likelihood of you taking or updating a sexual history?

		Please circle appropriate answer				
		Very likely				Not at all likely
		1	2	3	4	5
A	A 24 year old woman presents for a routine prescription for the contraceptive pill	1	2	3	4	5
B	A 24 year old woman presents for a routine Pap smear test	1	2	3	4	5
C	A 45 year old man requests advice re immunisations before a holiday to Bali	1	2	3	4	5
D	A 32 year old man has been told to present to you by his girlfriend whose own GP recently diagnosed a vaginal infection	1	2	3	4	5
E	A 20 year old man presents for a routine prescription for asthma medication and mentions in passing that he has a new girlfriend	1	2	3	4	5

3. For the same presentations, how embarrassed do you think these patients would feel if you were to take a sexual history?

		Please circle appropriate answer				
		<i>Very embarrassed</i>				<i>Not at all embarrassed</i>
		1	2	3	4	5
A	A 24 year old woman presents for a routine prescription for the contraceptive pill	1	2	3	4	5
B	A 24 year old woman presents for a routine Pap smear test	1	2	3	4	5
C	A 45 year old man requests advice re immunisations before a holiday to Bali	1	2	3	4	5
D	A 32 year old man has been told to present to you by his girlfriend whose own GP recently diagnosed a 'vaginal infection'	1	2	3	4	5
E	A 20 year old man presents for a routine prescription for asthma medication and mentions in passing that he has a new girlfriend	1	2	3	4	5

4. Do you consider any of the following to be barriers to your taking a sexual history?

		Please circle appropriate answer				
		<i>Major barrier</i>				<i>Not at all a barrier</i>
		1	2	3	4	5
A	An appreciable age difference between you & patient	1	2	3	4	5
B	Male patient	1	2	3	4	5
C	Female patient	1	2	3	4	5
D	Not enough time to take a sexual history	1	2	3	4	5
E	The first consultation with this patient	1	2	3	4	5
F	Fear of uncovering a problem you can't deal with	1	2	3	4	5
G	The presence of a third party in the consultation	1	2	3	4	5
H	Your knowledge of the patient outside the surgery	1	2	3	4	5
I	Issues related to language/culture	1	2	3	4	5

5. **If there is a third party present in the consultation does this act as a barrier to sexual history taking?**

very often

rarely

6. **For the following patient presentations (assume they are regular patients of your practice), how would you rate the likelihood of you recommending testing for chlamydia?**

		Please circle appropriate answer				
		<i>Very likely</i>				<i>Not at all likely</i>
		1	2	3	4	5
A	A 24 year old woman presents for a routine prescription for the contraceptive pill	1	2	3	4	5
B	A 24 year old woman presents for a routine Pap smear test	1	2	3	4	5
C	A 45 year old man requests advice re immunisations before a holiday to Bali	1	2	3	4	5
D	A 32 year old man has been told to present to you by his girlfriend whose own GP recently diagnosed a 'vaginal infection'	1	2	3	4	5
E	A 20 year old man presents for a routine prescription for asthma medication and mentions in passing that he has a new girlfriend	1	2	3	4	5

7. **What in your opinion are the main age groups in which genital chlamydia is seen?**

15-19 20-24 25-29 30-34 35-39

No particular age groups

8. **In symptomatic patients, which are the most common modes of presentation for chlamydia? (please tick all relevant)**

<i>Female Patients</i>		<i>Male Patients</i>	
A	Pain or burning on urination <input type="checkbox"/>	A	Pain or burning on urination <input type="checkbox"/>
B	vaginal discharge <input type="checkbox"/>	B	urethral discharge <input type="checkbox"/>
C	genital ulcer or lump <input type="checkbox"/>	C	genital ulcer or lump <input type="checkbox"/>
D	abdominal or pelvic pain <input type="checkbox"/>	D	abdominal pain <input type="checkbox"/>
E	jaundice or abnormal LFTs <input type="checkbox"/>	E	jaundice or abnormal LFTs <input type="checkbox"/>

9. For a patient who presents with symptoms of chlamydia or another STI(s), how common is it for you to ask about these behaviours?

Please circle appropriate answer					
	Very common				Not at all common
	1	2	3	4	5
A Specific sexual practices, eg vaginal, oral and anal sex; insertive or receptive sex	1	2	3	4	5
B Number, names and details of sex partners for contact tracing purposes	1	2	3	4	5
C Having sex with sex workers	1	2	3	4	5
D Recent overseas travel	1	2	3	4	5
E injecting drug use	1	2	3	4	5
F A previous history of STIs	1	2	3	4	5

10. For a patient in whom you have diagnosed a laboratory-confirmed STI, how common is it for you to ask about these behaviours?

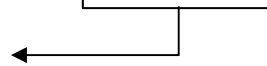
Please circle appropriate answer					
	Very common				Not at all common
	1	2	3	4	5
A A specific sexual practices, eg vaginal, oral and anal sex; insertive or receptive sex	1	2	3	4	5
B Number, names and details of sex partners for contact tracing purposes	1	2	3	4	5
C Having sex with sex workers	1	2	3	4	5
D Recent overseas travel	1	2	3	4	5
E injecting drug use	1	2	3	4	5
F A previous history of STIs	1	2	3	4	5

B. INVESTIGATIONS

11. Presumptive treatment for STIs involves treatment without first confirming the presence of infection by laboratory diagnosis. How often would you treat presumptively for a patient you suspected had chlamydia ?

- Always Mostly Sometimes Never N/A

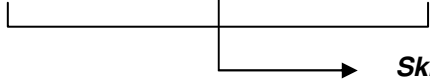
Skip to Q 14



12. When you treat presumptively, do you perform confirmatory laboratory tests at the same time?

- Always Mostly Sometimes Never

Skip to Q 14



13. If you treat presumptively without performing confirmatory laboratory tests, what are the main reasons for doing so? (Please tick all relevant)

- | | | |
|---|---|--------------------------|
| A | Concerns about reliability of diagnostic test | <input type="checkbox"/> |
| B | Patients don't like being tested | <input type="checkbox"/> |
| C | History of risk behaviour, eg unprotected sex | <input type="checkbox"/> |
| D | Recurrence of previously diagnosed infection, therefore no need to re-test | <input type="checkbox"/> |
| E | Patients cannot afford to pay for laboratory tests | <input type="checkbox"/> |
| F | Pressure from the Health Insurance Commission (HIC) to minimise pathology testing | <input type="checkbox"/> |
| G | Concerns about confidentiality of notification procedures if test result positive | <input type="checkbox"/> |
| H | Other reason (please specify) | <input type="checkbox"/> |

14. What are the two most common reasons for recommending testing for genital chlamydia to asymptomatic patients in your practice? (please tick two)

- | | |
|--|--------------------------|
| A Patient being in a high risk age group | <input type="checkbox"/> |
| B History of recent partner change or >1 partner in past 12 months | <input type="checkbox"/> |
| C History of risk behaviour, eg unprotected sex | <input type="checkbox"/> |
| D Clinical opportunity, eg patient undergoing routine Pap smear | <input type="checkbox"/> |
| E Patient referred because of sexual partner diagnosed with STI | <input type="checkbox"/> |
| F Patient self-presented for STI check because sexual partner diagnosed with ST | <input type="checkbox"/> |
| G Other reason (please specify) | <input type="checkbox"/> |

15. Which tests would you use to test an asymptomatic patient for chlamydia? (please tick one or more items in each case)

<i>Female Patients</i>	<i>Male Patients</i>
A First void urine for nucleic acid testing, eg PCR <input type="checkbox"/>	A First void urine for nucleic acid testing, eg PCR <input type="checkbox"/>
B Mid-stream urine for nucleic acid testing, eg PCR <input type="checkbox"/>	B Mid-stream urine for nucleic acid testing, eg PCR <input type="checkbox"/>
C Mid-stream urine for microscopy and culture <input type="checkbox"/>	C Mid-stream urine for microscopy and culture <input type="checkbox"/>
D Self-obtained lower vaginal swab for nucleic acid testing, eg PCR <input type="checkbox"/>	D Urethral swab for nucleic acid testing, eg PCR <input type="checkbox"/>
E Practitioner-obtained lower vaginal swab for nucleic acid testing, eg PCR <input type="checkbox"/>	E Urethral swab for smear and culture <input type="checkbox"/>
F Practitioner-obtained endo-cervical swab for nucleic acid testing, eg PCR <input type="checkbox"/>	F Blood test for chlamydia <input type="checkbox"/>
G Practitioner-obtained endo-cervical swab for microscopy and culture <input type="checkbox"/>	G Other (please specify) <input type="checkbox"/>
H Blood test for chlamydia <input type="checkbox"/>	
I Other (please specify) <input type="checkbox"/>	

16. Which diagnostic tests do you use for the following patient presentations?
(please tick one or more items in each case)

1. Female with vaginal discharge

- A First void urine for nucleic acid testing, eg PCR
- B Mid-stream urine for nucleic acid testing, eg PCR
- C Mid-stream urine for microscopy and culture
- D Self-obtained lower vaginal swab for nucleic acid testing, eg PCR
- E Practitioner-obtained lower vaginal swab for nucleic acid testing, eg PCR
- F Practitioner-obtained high vaginal swab for microscopy and culture
- G Practitioner-obtained endo-cervical swab for nucleic acid testing, eg PCR
- H Practitioner-obtained endo-cervical swab for microscopy and culture
- I Blood test for chlamydia
- J Blood test for syphilis
- K Blood test for HIV antibodies
- L Blood test for hepatitis B
- M Vaginal pH testing using narrow range pH paper (pH 4-6)
- N Other (please specify)

2. Female suspected PID

- A First void urine for nucleic acid testing, eg PCR
- B Mid-stream urine for nucleic acid testing, eg PCR
- C Mid-stream urine for microscopy and culture
- D Self-obtained lower vaginal swab for nucleic acid testing, eg PCR
- E Practitioner-obtained lower vaginal swab for nucleic acid testing, eg PCR
- F Practitioner-obtained high vaginal swab for microscopy and culture
- G Practitioner-obtained endo-cervical swab for nucleic acid testing, eg PCR
- H Practitioner-obtained endo-cervical swab for microscopy and culture
- I Blood test for chlamydia
- J Blood test for syphilis
- K Blood test for HIV antibodies
- L Blood test for hepatitis B
- M Pregnancy test
- N Other (please specify)

3. Male with non-purulent urethral discharge

- A First void urine for nucleic acid testing, eg PCR
- B Mid-stream urine for nucleic acid testing, eg PCR
- C Mid-stream urine for microscopy and culture
- D Urethral swab for nucleic acid testing, eg PCR
- E Urethral swab for smear and culture
- F Blood test for chlamydia
- G Blood test for syphilis
- H Blood test for HIV antibodies
- I Blood test for hepatitis B
- J Other (please specify)

C. TREATMENT

17. For treatment of a patient in whom you have diagnosed chlamydia, would you generally use? (please tick one or more)

- Doxycycline Azithromycin
 Roxithromycin Erythromycin None of the above

18. Which of these is an effective single dose treatment for chlamydia? (please tick one or more)

- Doxycycline Azithromycin
 Roxithromycin Erythromycin None of the above

D. PUBLIC HEALTH ISSUES

19. Which of these STIs are notifiable to the Department of Health WA? (please tick all applicable)

- Chlamydia Gonorrhoea Syphilis
 Human papilloma virus Lymphogranuloma venereum
 Herpes HIV AIDS
 Donovanosis Chancroid None of the above

20. If you diagnose a patient with a notifiable STI eg genital chlamydia, how often would you complete a disease notification form and send it to the Department of Health?

- Always Mostly Sometimes Never

21. In relation to patients you see who have an STI, do you:

		Please circle appropriate answer			
		<i>Always</i>	<i>Mostly</i>	<i>Sometimes</i>	<i>Never</i>
A	Consider that contact tracing is the responsibility of the GP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B	Tell the patient to advise their contacts to seek medical treatment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C	Prescribe medication for the contact of a patient with an STI without seeing that contact	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D	Check with the patient whether they have followed up their contacts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E	Ask the patient to tell you the name(s) of their contact(s) so that you can follow them up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F	Inform the Department of Health and ask for their assistance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	Review the patient's history in regard to risk behaviour at the time or at the next consultation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

E. DEMOGRAPHIC DETAILS

Finally we need some details about yourself and your practice. All information provided will remain strictly confidential.

22. Are you: male female

23. To which age group do you belong?

25-34 35-44 44-54 55-64 65+

24. What is the postcode of your practice? _____

25. How many years have you been working in general practice?

_____ Years.

26. What proportion of your practice patients are

A 15-24 years old?

<5% 5-10% 10-25% 25-50% 50-75% >75%

B male?

<5% 5-10% 10-25% 25-50% 50-75% >75%

C Do not speak English as their first language?

<5% 5-10% 10-25% 25-50% 50-75% >75%

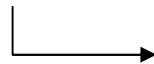
27. With in your general practice, how often do you

		Please tick appropriate answer				
		<i>daily</i>	<i>weekly</i>	<i>monthly</i>	<i>infrequently</i>	<i>never</i>
A	Provide contraceptive advice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B	Perform Pap smears	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C	Advise on safe sex practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D	Diagnose a patient with an STI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E	Recommend STI testing to asymptomatic patients from 'at-risk' groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

28. Have you diagnosed any cases of chlamydia in the past 4 weeks?

No

Yes



If yes, how many? _____

29. In relation to STIs, do you ever give patients information pamphlets?

Always

Mostly

Sometimes

Never

↓
Skip to Q 31

30. If you do give out pamphlets or have them in your waiting room, what is the source of your pamphlets? (please tick all applicable)

A Department of Health, WA

B Specialist College; please specify:

C Computerised medical software; please specify:

D Internet; please name website:

E Other; please specify:

31. Which reference source do you tend to use when managing patients with STIs? (please tick those applicable)

A Department of Health, WA, "Guidelines for managing STIs: a guide for primary health care workers." ("Silver book" and available on-line)

B Therapeutic Guidelines: Antibiotic ("Pink book" and available on-line)

C Journals; please specify:

D Textbooks; please specify:

E Internet; please name website:

F None in particular

G Other; please specify:

32. Are there any comments you would like to make?

.....

.....

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When you have completed the questionnaire you may fax it back or mail it using the reply paid envelope provided.

Fax number: 03 9285 5220

Thank you for taking the time to participate in this important study.

FURTHER OPPORTUNITIES:

A. Would you be interested in participating in a clinical audit of genital Chlamydia to earn, free-of-charge, either 20 CDP points for the RACGP, or 20 PDP points for ACRRM?

Yes No

If so, please provide your:

RACGP _____ or ACRRM _____ number.

B. Would like to be entered into a draw for a case of fine red wine?

Yes No

If you have answered yes to either of both of the above questions please provide your contact details and return this questionnaire by 30th May 2005

Name:

Postal address:
.....
.....

Telephone, office:
mobile:

Fax:

Email:

This identifying information will be separated from the answers on receipt of the completed questionnaire.

APPENDIX 2.1

CHLAMYDIA CLINICAL AUDIT - PRE AUDIT QUESTIONNAIRE

The guidelines for best practice can be found in:

- *Guidelines for Managing Sexually Transmitted Infections; A Guide for Primary Health Care Providers* 2nd ed. Health Department of Western Australia, Perth, 2001
- http://www.population.health.wa.gov.au/Communicable/resources_communicable.cfm#sexual go to Sexual Health and Blood-borne viruses, then Reports and Guidelines for Health Professionals, then to Guidelines for Managing STIs.

and/or

- *Guide to testing (Chlamydia)* which you received in June 2002 along with the Chlamydia campaign poster, pamphlet and gold standard answers. <http://www.couldihaveit.com.au/campaign.asp>

Pre Audit Questionnaire

Where do you get currently get information about sexually transmissible infections?

Does your clinic/practice display or have free copies of:

- Department of Health WA posters, pamphlets or information sheets on sexually transmitted infections (order form enclosed) Yes No
- Posters, pamphlets, postcards or information sheets about local community agencies and support services for young people particularly about sexuality and sexual health issues Yes No
- Posters, pamphlets, postcards or information in languages other than English Yes No

What kind of support do you need to manage the area of sexual health in your clinical practice?

Have you thought about offering young people the choice to see a doctor of the same sex when making an appointment at your clinic or practice? Please circle
Yes No NA, I already do this

Have you thought about offering offer bulk billing for young people and/or students at your clinic or practice? Please circle
Yes No NA, I already do this

When a young person (15-25) asks to be tested for an STI do you offer them the option of a longer consultation so that you can develop or update their sexual history? Please circle
Yes No

If there is not enough time at their current appointment do you encourage them to return for a longer appointment? Please circle
Yes No

If you have not completed a personal learning plan (PLP) or if this topic was not identified as a learning priority in your PLP what motivated you to participate in this particular audit?

What do you hope to achieve by participating in this audit?

APPENDIX 2.2

DATA COLLECTION FORM FOR CHLAMYDIA CLINICAL AUDIT

Patient Number _____ (Number from 1 to 20)

1. Patient's age _____ years

2. Patient's gender female male

3. Does patient identify as being
Aboriginal or Torres Strait Islander?

Yes No No record

4. Did you ask this patient if they:

- smoke? Yes No No record
- drink alcohol? Yes No No record
- take drugs? Yes No No record
- have ever been sexually active?
Yes No No record

5. If the patient is sexually active, did you ask about:

- their condom use?
Yes No No record
- their past history of STIs?
Yes No No record
- whether they currently have STI symptoms? Yes No No record
- number of sexual partners in the past 12 months? Yes No No record
- use of condoms with each sexual partner? Yes No No record
- past history of STIs in sexual partner(s)? Yes No No record
- current symptoms of STI in partners?
Yes No No record
- gender of sexual partners?
Yes No No record

6. Did you offer testing for chlamydia?

Yes No

7. If not, what were the reason/s? (Tick all that apply)

- Patient is not currently sexually active
↑
- Patient in a long-term monogamous relationship
↑
- Nature of patient's presenting problem made it inappropriate to talk about sexual health or offer chlamydia testing

I did not feel comfortable to talk about sexual health/offer chlamydia testing to this patient because

(specify) _____

• I referred patient elsewhere
(where) _____

• Other
(specify) _____

8. If you did not offer testing, did you use the opportunity to promote safe sex?

Yes No No record

9. If you did offer testing, what were the clinical indications for offering the test? (Tick all that apply)

- Patient aged 15-25 years
- Patient has had unprotected sex
- Patient has changed partners in the last 12 months
- Patient has had >1 partner in the last 12 months
Patient requested chlamydia/STI or sexual health check-up
- Patient has STI symptoms
- Patient's partner has STI/STI symptoms
- Test done as part of a Pap smear or well women's check-up
- Test done as part of an antenatal check-up
- Test done as part of an infertility investigation
- Other(specify)

10. If you did offer testing, was the patient tested? Yes No

If no, why not?

11. What test for chlamydia was done? (Tick all that apply)

- First void urine for nucleic acid testing, e.g. PCR
- Mid-stream urine for nucleic acid testing, e.g. PCR
- Mid-stream urine for microscopy

- and culture
- Self-obtained lower vaginal swab for nucleic acid testing, e.g. PCR
- Practitioner-obtained lower vaginal swab for nucleic acid testing
- Practitioner-obtained high vaginal swab for microscopy and culture
- Practitioner-obtained endo-cervical swab for nucleic acid testing
- Practitioner-obtained endo-cervical swab for microscopy and culture
- Urethral swab for nucleic acid testing, e.g. PCR
- Urethral swab for smear and culture
- Blood test for chlamydia
- Other specify _____

12. Did patient return for results?

Yes No No record
 If not, how did you inform the patient of their results?

13. If the test result was negative, did you use the opportunity to promote safe sex to the patient?

Yes No†

14. If the test result was positive did you:

- Take a full sexual history? Yes No†
- Perform a genital examination (including speculum exam in females)? Yes No
- Offer testing for other STIs as clinically indicated Yes No

Please specify which

- Treat? Yes No
 With what medication? _____
- Did you tell patient to avoid sex or practice safe sex during the first week after treatment? Yes No
- Did you use the opportunity to promote safe sex? Yes No
- Did you explain to patient about the window period for syphilis, Hepatitis B and HIV? Yes No
- Did you initiate partner notification of sexual partners by:
 - patient agreeing to notify his/her contacts Yes No
 - notifying patient's contacts yourself Yes No
 - giving list of contacts to disease control nurse at local Population Health Unit Yes No
 - other method Yes No specify _____

- Did you ask the patient to return for review after 3 months? Yes No
- Did you complete a statutory disease notification form for the patient? Yes No

15. Approximately how long did the initial consultation take?

_____ mins

APPENDIX 2.3

CHLAMYDIA CLINICAL AUDIT DATA FEEDBACK DOCUMENT

1. **Demographic information:**

	You	All participating GPs
Patients' ages		
Patients' gender		
ATSI patients		
% of patients asked lifestyle risk questions		
Average length of consultation		

2. **Number of sexually active patients asked about:**

	You	All participating GPs
their condom use		
their past history of STIs		
whether they currently have STI symptoms		
number of sexual partners in last 12 months		
use of condoms with each sexual partner		
past history of STIs in sexual partner(s)		
current symptoms of STI in partners		
gender of sexual partners		

3. **Percentage of GPs giving as reason for not offering chlamydia testing:**

	You	All participating GPs
Patient not currently sexually active		
Patient in a long-term monogamous relationship		
Nature of patient's presenting problem made it inappropriate to talk about sexual health or offer chlamydia testing		
I did not feel comfortable to talk		
I referred patient elsewhere		
Other		

4. **Percentage of:**

	You	All participating GPs
Patients NOT tested given safe sex information		
Audit patients tested for chlamydia		
Positive chlamydia tests		
Patients given safe sex promotion		
Full sexual histories taken		
Genital exams done		
Partner notification initiated		
Disease notification completed		

APPENDIX 2.4

CHLAMYDIA CLINICAL AUDIT - GPs' REFLECTION ON THE DATA

1. Did the audit enable you to reflect on your ability to assess lifestyle risk in 15-25 year old patients?

Yes No Partly, please explain

2. Did the audit enable you to reflect on your ability to take a sexual history from a patient 15-25 years old?

Yes No Partly, please explain

3. Did the audit enable you to reflect on your ability to test and treat patients with genital chlamydia?

Yes No Partly, please explain

4. Did the audit enable you to reflect on your ability to ensure that sexual partners of patients with genital chlamydia are traced and undergo medical consultation and chlamydia testing?

Yes No Partly, please explain

5. Did the audit enable you to reflect on your knowledge of local, regional and state support services, agencies and resources which deal with sexual and reproductive health?

Yes No Partly, please explain

6. Did the audit enable you to reflect on your practices with regard to statutory disease notification?

Yes No Partly, please explain

7. What are the biggest barriers you have found in managing sexual health issues in this age group?

8. How has this audit changed your practice?

9. Do you feel you have achieved the following audit objectives? (circle)

- To understand the behaviours which may place young people at risk of chlamydia Yes Not
- To include a lifestyle risk assessment in all consultations with young people Yes Not
- To learn to include safe sex education in consultations with young people Yes Not
- To learn about testing for chlamydia Yes Not
- To learn about management of chlamydia including partner notification Yes Not

10. What remaining goals do you have for managing sexual health in your practice?

Thank you

APPENDIX 2.5

CHLAMYDIA CLINICAL AUDIT ACTIVITY EVALUATION

How could this clinical audit be improved in terms of:

- enrolment procedures?

- form design?

- data collection?

- anything else?

Thank you

APPENDIX 3 WEBSITE RESOURCES FOR GPS

www.latrobe.edu.au/chlamydia

Material sent to GPs participating in the clinical audit included this website address so that GPs could seek out information about other resources and services. The website offered the following information:

FOR GPS - PROFESSIONAL DEVELOPMENT, INFORMATION AND RESOURCES

Perth and Hills Division of General Practice

<http://www.phdgp.com.au/yfd.html>

The Youth Friendly Doctor is a program designed to establish a link between young people (12-24) and a GP who has a special interest in adolescent health issues.

Osborne Division of General Practice

<http://www.odgp.com.au>

From home page click on youth

National Divisions Youth Alliance

<http://ndya.adgp.com.au/site/index.cfm>

The NDYA works with GPs, the Divisions' network, young people and other stakeholders to support general practice in improving access and health outcomes for young people. It provides support, sharing of information advocacy and networking opportunities for youth health project officers working in Divisions on youth health - related projects.

NSW Centre Advancement of Adolescent Health

<http://www.caah.chw.edu.au/>

CAAH was established in 1998 to create better health and well-being for all young people in New South Wales. A key focus areas is development of information and resources to increase knowledge and understanding of youth health issues through

- user-friendly information resources(fact sheets, training manuals and guidelines)
- an adolescent health web-based clearinghouse for disseminating new resources and promoting links to reviewed sites.

NSW Multicultural Health Communication Service (Multicultural Communication) <http://www.mhcs.health.nsw.gov.au/>

This service, while specific to NSW, may be useful for GPS working with some non-English speaking communities in WA. The NSW Department of Health endorses the multilingual health information published on the website. Some multilingual resources produced by other services are also posted on this website and there are links to related websites.

GP Resource Kit-Enhancing the skills of General Practitioners in caring for young people from culturally diverse backgrounds

The kit is a guide to providing health care to adolescents in general practice which identifies strategies and practical steps for GPs. It outlines the skills needed for working with young people and their families, while addressing the developmental, cultural and environmental factors that influence their health status.

Getting the GP Resource Kit:

- To download go to <http://www.caah.chw.edu.au/resources/#03>
- To order online, [please click here](#).
- Call (02) 9845 3585 for cost details

South Tasmania Division of General Practice <http://www.southtasdgp.com.au>

This division has produced Adolescent Health a Resource Kit for GPs. It is available on line with a number of PDFs for individual issues e.g. sexual and mental health for young people. It can be accessed as follows:

- On home page using Fast Find Index go to youth health,
- click on that to find Adolescent Health a Resource Kit for GPs
- Hit on that to see the options for downloading the whole kit and /or different sections.

That page also has some useful links to other websites for GPs working with young people

FOR YOUNG PEOPLE – INFORMATION AND SERVICES

Your Zone Population Health Program

<http://www.yourzone.com.au>

Young people can access information about: sexual health, mental health, health care, drugs, alcohol, disabilities, nutrition and physical activity.

Pressurepoint cyber youth clinic

<http://www.pressurepoint.com.au>

This AMA (WA) Foundation website, provides access to high quality information about a wide range of health-related issues for young people. It directs users to a listing of doctors with specific Youth Friendly Doctor training.

Quarry Health Centre

<http://www.fpwa-health.org.au/quarry.htm>

The Quarry General Practice for under-25s is a free, youth-friendly and confidential practice which provides affordable sexual health services.

Clockwork

<http://www.clockhealth.com.au/>

The website includes information: for young people on areas such as mental health, healthy eating and lifestyle, stress management, sexual health, relationships, licit and illicit drugs.

Lawstuff know your rights

<http://lawstuff.org.au>

Website owned by The National Children's and Youth Law Centre, which is an independent, non-profit organisation working for all Australians under the age of 25. It provides legal information on a range of issues for young people at federal stake and territory levels.

APPENDIX 4 REFERENCES

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