

CONTACT TRACING FOR GONORRHOEA AND CHLAMYDIA BY GENERAL PRACTITIONERS IN NEPEAN BLUE MOUNTAINS LOCAL HEALTH DISTRICT



Health
Nepean Blue Mountains
Local Health District

Allchin L¹, Forssman B L¹
1. NBMLHD Public Health Unit

BACKGROUND

Sexually transmissible infections (STIs) have been steadily increasing across New South Wales (NSW) since 2010 (1). Contact tracing is an essential part of the clinical management of STIs as it can prevent further spread of the disease and reinfection from untreated partners. Under the *NSW Public Health Act 2010* it is the responsibility of the diagnosing clinician to ensure that contact tracing for STIs is undertaken (2). The majority of STI infections in NSW are diagnosed by general practitioners (GPs) (3,4).

Various guidelines have been developed to assist GPs with contact tracing (5). Contact tracing can either be by patient referral, where the contact tracing is undertaken by the index case; or provider referral where the healthcare provider communicates with the contacts on behalf of the patient.

Although contact tracing guidelines are available for GPs, previous research shows that GPs are poorly skilled or resourced to effectively undertake this activity (6,7,8). The overall aim of this enhanced surveillance was to assess the quality of the contact tracing process.

METHODS

Under the *NSW Public Health Act 2010* (2), laboratories are required to notify all diagnoses of chlamydia and gonorrhoea to the health department. At Nepean Blue Mountains Local Health District (NBMLHD) Public Health Unit (PHU) enhanced surveillance for gonorrhoea is routinely undertaken, but surveillance for chlamydia is usually passive.

The study population consisted of all GPs that diagnosed newly notified cases of chlamydia and gonorrhoea for a three-month period between March and May 2015. All of these cases were residents of NBMLHD during this time period. NBMLHD is located on the fringe of metropolitan Sydney, encompassing suburban, semi-rural and rural areas, with a relatively younger, more disadvantaged and less multicultural population compared to NSW as a whole (9).

A letter and questionnaire were sent to diagnosing GPs. The letter outlined the importance of contact tracing and the GP's responsibility in ensuring that contact tracing is undertaken. It also provided GPs with links to resources to assist with contact tracing.

The questionnaire gathered information regarding contact tracing initiation and type (patient referral vs provider referral); how far back in time contacts were traced; and, numbers of sexual partners identified, contacted, tested and treated. If the questionnaire was not returned after two weeks, a reminder letter and repeat questionnaire were sent to the GP. If the questionnaire was not returned following the second letter the case was recorded as lost to follow up.

The GPs were asked to complete the questionnaire and fax it back to the Public Health Unit (PHU). The results of the questionnaire were collated and analysed in Microsoft Excel. Univariate analyses were undertaken using χ^2 tests to assess associations between patient characteristics (age group, gender, sexual exposure) and aspects of contact tracing (whether it was initiated, whether trace back occurred for the recommended time).

RESULTS

A total of 206 questionnaires were sent to GPs. The majority of questionnaires were sent for chlamydia notifications (91%). The response rate was 77.7% (160/206). The majority of questionnaires returned were for people aged 16-29 years. There was a significantly higher proportion of gonorrhoea cases in the 45+ year age group compared to chlamydia cases (2/12 (16.7%) vs. 2/148 (1.4%), $\chi^2=13.73$, $p<0.005$).

GPs stated that contact tracing was commenced for 71.9% (115/160) of notified cases. In two cases the contacted tracing was provider-initiated. For the remaining cases the contact tracing was patient-initiated. A significantly higher proportion of females had contact tracing initiated compared to males (84/104 (80.8%) vs. 31/56 (55.4%), $\chi^2=11.6$, $p<0.005$). There was no significant difference between age groups or sexual exposure and if contact tracing was initiated.

There was wide variation in the timeframe used by GPs for contact tracing of sexual partners, from three days to two years for chlamydia, and two weeks to six months for gonorrhoea. The number of cases that had their sexual partners traced back for less than the recommended time was higher for chlamydia (93/148, 62.8%) compared to gonorrhoea (5/12, 41.7%).

A significantly higher proportion of males compared to females had their sexual partners traced back for less than the recommended timeframe or an unknown amount of time (41/56 (73.2%) vs. 57/104 (54.8%), $\chi^2=5.2$, $p<0.05$). There was no significant difference between age groups or sexual exposure and if sexual contacts were traced back for the recommended timeframe or less. In 28% (45/160) of cases, GPs did not know how many sexual partners their patients had, with 34% (55/160) of GPs not knowing how many partners were contacted, and 48% (76/160) not knowing how many were tested and treated.

GPs were asked why contact tracing had not been initiated, stating various barriers to the commencement of contact tracing (figure 2), including: overseas acquisition; unable to recall the patient; patient refused; patient referred elsewhere; patient unable to contact partners; and, patient presented as contact.

Table 1: The distribution of chlamydia and gonorrhoea cases by age and gender

Age	Chlamydia		Gonorrhoea		Total	
	n	%	n	%	n	%
16-29 years	122	82.4	6	50.0	128	80.0
30-34 years	24	16.2	4	33.3	28	17.5
45+ years	2	1.4	2	16.7	4	2.5
Gender						
Male	48	32	8	67	56	35
Female	100	68	4	33	104	65
Type of Sexual exposure						
Opposite sex	107	92.2	9	75.0	116	89.9
Same Sex	10	8.6	2	16.6	12	9.3
Both Sexes	0	0	1	8.3	1	0.8

Figure 1: Completeness of contact tracing for males versus females

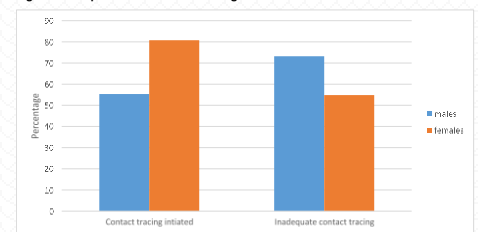


Figure 2: Stated barriers to initiating contact tracing



DISCUSSION

In this enhanced surveillance, the majority of GPs stated that they have initiated contact tracing for their patients with chlamydia or gonorrhoea. However, this is not being undertaken adequately. More than half of GPs traced back sexual partners for less than the recommended time. In over a quarter of cases, in addition, GPs were unaware of numbers of sexual partners. This could lead to asymptomatic contacts being missed and allow for further spread of the disease and/or possible re-infection.

This enhanced surveillance activity showed that the proportion of patients that had contact tracing initiated by their GP in NBMLHD was similar to a previous study that looked at contact tracing for sexually transmitted infections in NSW in 2007 (10). The quality of contact tracing being performed seems to have improved somewhat, with more sexual partners being identified and a higher percentage of sexual contacts being traced and treated by GPs in NBMLHD compared to the previous study (10). There are, however, substantial improvements yet to be made.

We found that contact tracing is undertaken differently for male and female patients by GPs in NBMLHD. Females were significantly more likely to have contact tracing initiated compared to males. Furthermore, if contact tracing was commenced, males were more likely to have their sexual partners traced back for less than the recommended time. It has been shown that female GPs are more likely to show an interest in sexual health issues compared to male GPs (11) and female GPs are more likely to have longer consultation times (12). Therefore we assume that female GPs may have better skills and knowledge surrounding contact tracing and have more time to ensure a thorough contact tracing history has been undertaken. Male patients, on the other hand, are more likely to have shorter consultation times when seeing a GP (13) and a reluctance to talk about relationships and personal issues (14). Female patients are more likely to present to female GPs (15). All these factors might explain why this enhanced surveillance activity found that contact tracing appears to be conducted more comprehensively for females compared to males.

Potential ways to improve the quality and completeness of contact tracing in general practice could include providing further targeted GP training, developing new computer-based tools to make contact tracing easier, or outsourcing contact tracing activities to other providers, such as a centralised service in the Department of Health or the local sexual health clinic. This is a model that has been successfully implemented in other jurisdictions across Australia (16, 17).

CONCLUSION

If the responsibility of contact tracing were to remain with GPs, it is important that an effective targeted approach to improving GPs knowledge and confidence in this area be undertaken. Collaborative work is required to address common barriers, and develop innovative clinical software tools to assist GPs in undertaking this essential activity.

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