

NOTIFIABLE SEXUALLY TRANSMISSIBLE DISEASES, NSW 1991–1999

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Sexually transmissible diseases (STDs) have been on the public health agenda for a long time. In addition to personal suffering, some STDs have been linked to the increased transmission of other infections such as HIV, and to physical complications, including pelvic inflammatory disease, infertility and cancer.¹ STDs are highly preventable, however, and:

- condom use
- case identification and treatment
- partner notification and screening;

as well as more traditional methods of prevention such as:

- abstinence
- long-term monogomy,

have all been advocated to curb transmission.

The monitoring of progress towards the control of STDs has in part relied on public health surveillance. However, the interpretation of STD surveillance data remains difficult because:

- new infections are under-reported as a large proportion of infections are asymptomatic;
- complicated algorithms based on laboratory results and treatment history are required to classify syphilis infections;

- there is a reluctance to notify these sometimes stigmatised conditions.

Under the NSW Public Health Act, laboratories have been required to notify diagnoses of gonorrhoea and syphilis since 1991. In August 1998, *Chlamydia trachomatis* infections, chancroid, granuloma inguinale, and lymphogranuloma venereum were included as notifiable conditions. In addition, doctors and hospitals are required to notify diagnoses of syphilis. Here we summarise surveillance data on STDs for the nine-year period 1991 to 1999.

METHODS

For each notification, public health unit staff record case details including age, sex, postcode, diagnosis, and date of specimen collection, on the confidential statewide Notifiable Diseases Database (NDD). Data on gonorrhoea and syphilis were available on NDD for the years 1991–1999. Details of Aboriginality, sexuality or ethnicity of cases are not notified by laboratories. For syphilis, cases were grouped by whether they were classified by the treating doctor as:

- congenital
- infected within the past year
- infected more than a year before or diagnosed as latent
- not reported.

Analysis of data on chlamydia was restricted to 1999, which was the first full year of reporting. Incidence rates were calculated using the estimated 1997 mid-year population from the Australian Bureau of Statistics.

TABLE 4

NOTIFICATIONS OF SYPHILIS, GONORRHOEA, 1991–1999 AND CHLAMYDIA, 1999 NSW

Year of onset	Syphilis				Total	Gonorrhoea Total	Chlamydia* Total
	Congenital	<1 year	>1 year latent	Unknown			
1991	1	1	1	584	587	395	
1992	1	2	3	874	880	494	
1993	0	6	7	728	741	382	
1994	2	29	21	928	980	357	
1995	7	136	31	666	840	428	
1996	3	71	37	553	664	522	
1997	4	57	26	426	513	636	
1998	0	45	24	536	605	1051	
1999	1	89	99	333	522	1288	2464

* Not notifiable until August 1998

RESULTS

Syphilis

During 1991–1999, there were 6,332 cases of syphilis notified in NSW. The greatest number of notifications were received in 1994 and the least in 1997 (Table 4). Very few cases were notified by doctors (less than one per cent), the remainder were laboratory notifications of markers for syphilis infection, which alone provide insufficient data to determine whether or not the infection was recent. The proportion of cases reported by clinical classification improved in 1999, largely due to improved follow up by public health units, however 64 per cent of cases remained unclassified in that year. The number of cases infected within one year of notification (that is, new cases) is therefore likely to be vastly under-reported.

For the nine-year period, case rates for all notifications were highest among persons living in the Sydney area, males, and young adults (Table 5). Compared with the other STDs under surveillance, there were relatively high rates for notifications of people over 35 years of age, suggesting old, rather than recent infections. When analysed by clinical classification:

- 95 per cent of the 19 individuals born with congenital syphilis were born outside the Sydney area;
- recent infections were more likely to be in residents of rural areas, women and younger people;
- persons with unclassified infections were more likely to be resident in the Sydney area, men and older people (Table 5).

In 1999, the mean age of cases where infection was acquired in the previous year was 28.9 years, compared with 47.9 years for those whose infections were acquired more than one year before notification, 44.3 years for other latent cases, and 44.7 years for unclassified cases.

Gonorrhoea

During 1991 to 1999, there were 5,553 cases of gonorrhoea notified in NSW. Notifications increased steadily from 1991 to 1997, and dramatically so from 1998 (Table 4). In 1999 the case rate was 20.5 per 100, 000.

For the nine-year period, the highest notification rates were among residents of the Sydney area, men, and young adults (Table 5). In 1999, the mean age of cases was 32.6 years. South Eastern Sydney Area accounted for over 40

TABLE 5

CHARACTERISTICS OF PATIENTS NOTIFIED WHO HAD SYPHILIS OR GONORRHOEA, 1991–1999 OR CHLAMYDIA, 1999, NSW

Case characteristic	Syphilis* 1991–1999				Gonorrhoea 1991–1999		Chlamydia 1999			
	Congenital	<1 y	>1y	Unknown	Total (%)	Rate#	Total (%)	Rate#	Total (%)	Rate#
Residence*										
Sydney area	1	76	131	4153	4361 (69)	12.9	4337 (78)	13.0	1175 (48)	31.8
Other NSW	18	359	119	1474	1970 (31)	8.3	1055 (19)	4.6	1272 (52)	49.4
Sex*										
Male	9	156	112	3255	3532 (56)	12.6	4779 (86)	17.1	1113 (45)	35.8
Female	9	272	136	2208	2626 (41)	9.3	731 (13)	2.6	1335 (54)	42.3
Age group										
0–9	18	5	0	217	240 (4)	3.0	108 (2)	1.4	29 (1)	3.3
10–14	0	5	1	23	29 (<1)	0.7	23 (<1)	0.6	24 (1)	5.5
15–19	0	97	25	329	451 (7)	11.5	482 (9)	12.5	498 (20)	116.3
20–24	0	126	21	565	713 (11)	17.5	1093 (20)	26.8	714 (29)	157.8
25–34	0	116	56	1361	1532 (24)	17.6	2336 (42)	26.8	819 (33)	84.6
35–44	0	53	57	1162	1273 (20)	14.7	1098 (20)	12.6	265 (11)	27.4
45–54	0	16	31	850	897 (14)	12.4	312 (6)	4.3	83 (3)	10.3
55–64	1	5	18	442	466 (7)	9.5	55 (<1)	1.1	19 (1)	3.5
65+	0	12	41	676	729 (12)	10.2	44 (<1)	0.6	13 (1)	1.6
Total	19	435	250	5627	6332	11.2	5553	9.8	2464	39.1

* excludes missing–other

average annual notification incidence based on 1997 population estimates

+ see Table 1 for complete headings

per cent of all NSW notifications. A NSW Health case study in 1999 (unpublished) found that the majority of these cases were likely to be men who have sex with men and who live in the eastern- and inner-Sydney area. Where the site of infection was specified, anal-rectal infections accounted for 13 per cent of NDD notifications in 1999. However, the site of infection was unspecified for 42 per cent of cases.

Chlamydia

In 1999, there were 2,464 cases of chlamydial infection notified in NSW: the highest annual case rate for any of the notifiable STDs (Table 1). The highest rates of notifications of chlamydia were among women, people living outside the Sydney area, and people in the 20–24 year old age group (Table 5). The mean age of cases was 26.5 years.

Diagnosis of chlamydia by nucleic amplification techniques increased in recent years and accounted for 38.7 per cent of notifications in 1999.

Other bacterial STDs

Only one case of chancroid, which was acquired overseas, was reported in NSW in 1999. No cases of granuloma inguinale or lymphogranuloma venereum have been notified.

DISCUSSION

These data indicate that some bacterial STDs continue to be a major problem in New South Wales. Curiously, different pathogens, while sharing common routes of transmission, seem to affect different communities. Recently, gonorrhoea has become more common among men who have sex with men in the eastern- and inner-Sydney area, while chlamydia is relatively more commonly notified in people who are younger, women, and reside in rural areas. There are insufficient clinical data collected describing syphilis cases to reliably distinguish between recent and past infections. However, the available data indicates a strikingly disproportionate burden of congenital and recent infections in rural areas.

Clearly, these surveillance data do not provide a complete picture of the burden of STDs in NSW for a number of reasons. First, more common STDs such as venereal warts

and herpes are not notifiable in NSW, in part because of the difficulty in discerning incident cases. Second, there is substantial under-reporting of those diseases that are notifiable: many people with infections do not present to health care workers, some health care workers do not make the diagnosis (especially if the patient has few or no symptoms) and some laboratories and doctors do not notify diagnosed cases to public health units. Third, screening programs targeted at certain high-risk groups, such as men who have sex with men, and women of child bearing age, may lead to relative over-representation of these groups in surveillance data.

Nonetheless, STD surveillance has provided important data that were used to inform the recent gonorrhoea-prevention campaign for eastern- and inner-Sydney men who have sex with men.² The data on chlamydia will be similarly useful for targeting better prevention programs across the State. Historical data for syphilis has suffered from a lack of clinical detail that has limited its usefulness for tracking trends in new infections. The reason for the relatively high proportion of congenital and recent syphilis infection in non-Sydney areas requires further assessment. It may reflect better investigation of cases by public health units in rural areas. However, it may also reflect limited access to prenatal care in some communities. In addition, information on the Aboriginality of patients has not been available for most STDs. In recognition of these limitations, in 2000, the NSW Department of Health recommended that public health units actively seek from doctors the clinical details of patients diagnosed with syphilis and notified by laboratories. Better quality of information describing the demographic characteristics, including Aboriginality, would also be useful for the planning and implementation of prevention programs.

REFERENCES

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