

Sex in the suburbs

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BACKGROUND Many suburban sexual health clinics exist in Australasia. However, sexual health research has hitherto been restricted to populations from major metropolitan centres.

OBJECTIVE To describe the demographic, sexual characteristics and presenting diagnoses of 6521 new patients attending a sexual health clinic in the western suburbs of Sydney (New South Wales).

DISCUSSION Patients originated from over 50 different countries. Postcode analysis suggested the clinic sample was representative of the socioeconomic distribution of the area, but there were notable ethnic disparities. The classic bacterial sexually transmitted infections constituted only a small proportion of presentations, with asymptomatic infections and those requiring complex therapies more commonly encountered. This has resource implications for general practitioners and specialist clinics alike. Improved liaison between specialist sexual health clinics and GPs, together with a raised awareness of sexual health services in general, has the potential to significantly improve overall public health.

Sexual health, in particular sexually transmitted infections (STIs) are an increasing public health problem.¹ Sexually transmitted infections facilitate the transmission and acquisition of HIV^{2,3} and are associated with acute and chronic morbidity. As such they constitute a significant socioeconomic burden.⁴

Sexual health care in Australia is currently fragmented; occurring in family planning, general practice, sexual health, gynaecology, urology, dermatology and infectious diseases clinics. Sexual health attendances constitute a significant⁵ and increasing⁶ proportion of the general practitioner's workload and an unknown (but probably small) proportion of other specialities. This is in comparison to the United Kingdom, where sexual health clinics (SHCs) are the principal site for the diagnosis and treatment of STIs.⁷ As a result of the wide dispersal of presenting behaviours, some health professionals may be unpractised or uncomfortable taking sexual health histories, do not have the facilities to screen for STIs, or have limited knowledge of the practises of

SHCs. Sexual health clinics provide a variety of functions including diagnosing, treating and preventing STIs including HIV. They are open access, do not require referral, are free of charge, provide consultancy, and act as a focus for expertise in sexual health.

In Australia, surveillance data only exist for a small number of infections, and reporting mechanisms vary from state to state. What limited data are available suggest that STI rates are increasing, a phenomenon observed in many other developed countries.⁸ For example there was a three-fold increase in gonorrhoea in New South Wales between 1991 and 1999.⁹ There is substantial under reporting of notifiable STIs; many people with infections are asymptomatic, diagnoses may be missed and reporting by laboratories and doctors is not always complete.⁹ In addition, the more common STIs such as genital warts and genital herpes are not notifiable in NSW, thus making recording of incidence even within SHCs difficult.

Most studies within SHCs have taken place within cities at inner city SHCs and it

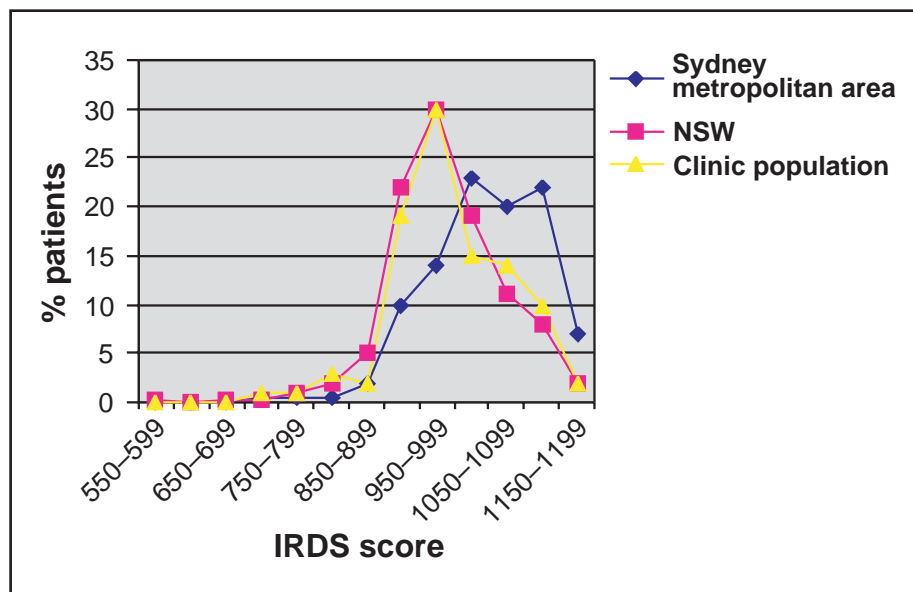
is not known how representative these are for more suburban areas. For example, only 9529 (0.3%) of the 3 069 391 Sydney (NSW) population live within the central business district,¹⁰ the remainder reside within the suburbs. While workers coming into the city access city centre services, specific groups of individuals (such as homosexual men and commercial sex workers) may be over represented. Furthermore, the term 'suburban' specialist SHC is a peculiarly Australasian institution. In the UK and the United States, SHCs tend to be situated in major metropolitan areas. It is only in Australia and New Zealand that such clinics have existed over the past two decades.

Aims

In view of this clear evidence suggesting a significant, increasing and under reported public health problem and a lack of studies within suburban Australia, we set out to investigate some aspects of sexual health care in a suburban western Sydney suburb. Parramatta Sexual Health Centre (PSHC) is the sole provider of specialist

Table 1. Countries of birth of clients and residents of Parramatta

Country of birth	Parramatta ¹⁵		PSHC	
	Number	%	Number	%
Australia	91 001	65	3740	61
UK	5500	4	307	5
Lebanon	5950	4	84	1
China	3987	3	186	3
New Zealand	2234	2	245	4
Philippines	2099	2	127	2
Hong Kong	2340	2	45	1
India	2320	2	112	2
Other	23 726	17	917	15
Unknown	0	0	368	6
Total	139 157		6131	

**Figure 1. Social deprivation scores**

sexual health care in the area.

We sought to describe the demographics, sexual characteristics and presenting diagnoses of clients attending the PSHC and compare the demographic data between the clients attending and the general population of the Parramatta district.

Methods

This was a retrospective incidence survey. As part of routine clinical practice, consultation information was entered onto a computerised Sexual Health Information Package (SHIPS) database. Information

relating to all new patients from January 1999 to January 2001 was obtained from this database and analysed using SAS (version 8.2). Statistical analysis included chi-square and t-tests.

Diagnoses were categorised into:

- STIs – chlamydia, gonorrhoea, non-gonococcal urethritis (NGU), genital warts, genital herpes, syphilis, trichomoniasis, presumed PID and pubic lice
- other genital complaints – candida, bacterial vaginosis, dermatitis, UTIs, cervicitis, molluscum contagiosum, vulval symptoms, genital rash,

bartholinitis and epididymitis

- sexual dysfunction
- HIV related illness
- women's health – Pap smears, menstrual disorders, pregnancy, and
- other diagnoses – viral hepatitis, sexual assault, etc. not falling into the above categories.

Residential postcode was used to assess distances travelled by clients and to ascribe Index of Relative Socioeconomic Disadvantage (IRSD) scores.¹⁰ This index summarises the information available from variables related to education, occupation, income, family structure, ethnicity (proficiency in use of the English language) and housing according to residential postcodes. The average score in NSW is 1000; a higher score than this means the area is relatively advantaged. We were therefore able to allocate IRSD scores to all attendees for whom we had a postcode.

Results

Patient demographics

During the study period, 6131 new patients attended, of whom 3621 (59%) were women with the majority 3740 (61%) of clients being born in Australia. Patients originated from more than 50 other countries, the commonest being the UK (5%), New Zealand (4%), China (3%), and the Philippines (2%). Eighty-four clients were from Lebanon, which was the eighth commonest country of origin. Table 1 lists the countries of birth of new patients and compares their distribution to the government defined boundaries of Parramatta. The Lebanese community appears to be under represented.

Postcodes were available for 5837 (95%) clients. Forty-one percent lived within 10 km of the PSHC. As the population of the Parramatta area is 139 157,¹¹ this implies that we collected data on 0.3% of its population. The IRSD scores for the 10 commonest postcodes of clients exactly matched the distribution of NSW, with an average score of 1000. However, this is markedly different from the Sydney metropolitan area as defined by postal areas (Figure 1).

The median age of patients was 30 years for women and 31 years for men; 1956 (30%) were aged 15–24 and 3978 (61%) were aged 25–54 years. The age distribution of patients compared to the local population is shown in Figure 2. As expected, the age ranges 15–45 years are over represented in the clinic. The median age of those attending for a Pap smear was 42 years of age compared to 26 years of age for those attending for other reasons.

Sexual characteristics

Sexual orientation was recorded in 5477 (89%) of the cases with 4990 (91.1%) being heterosexual, 257 (4.7%) bisexual, 214 (3.9%) homosexual, and 16 (0.3%) were not sexually active. While no comparable data are available for the Parramatta area, it appears a lower proportion of homosexual and bisexual clients were seen compared to major urban clinics, such as Sydney Sexual Health.

There were 359 sex workers, of whom 238 (64%) were born in Australasia, 46 (13%) in Thailand, 12 (3%) in China and 12 (3%) in the UK. Many were attending for STI screens relating to their work activities. Two hundred and ninety-two (5%) clients reported they were contacts of sex workers and 164 (3%) were current or past intravenous drug users.

Diagnoses

Diagnoses were recorded for 3484 (53.4%) of new patients. There was a marked difference in the distribution of diagnoses between men and women (Figure 3). For men, the two commonest diagnoses (acute NGU and genital warts) accounted for 34.8% of all diagnoses, whereas in women, the two commonest diagnoses (candidiasis and genital warts) accounted for only 25.2% of all diagnoses. For both heterosexual and homosexual men, NGU was the commonest diagnosis (representing 15.4% and 12.7% of diagnoses respectively). The chronic viral STIs namely genital warts and genital HSV accounted for 24% of

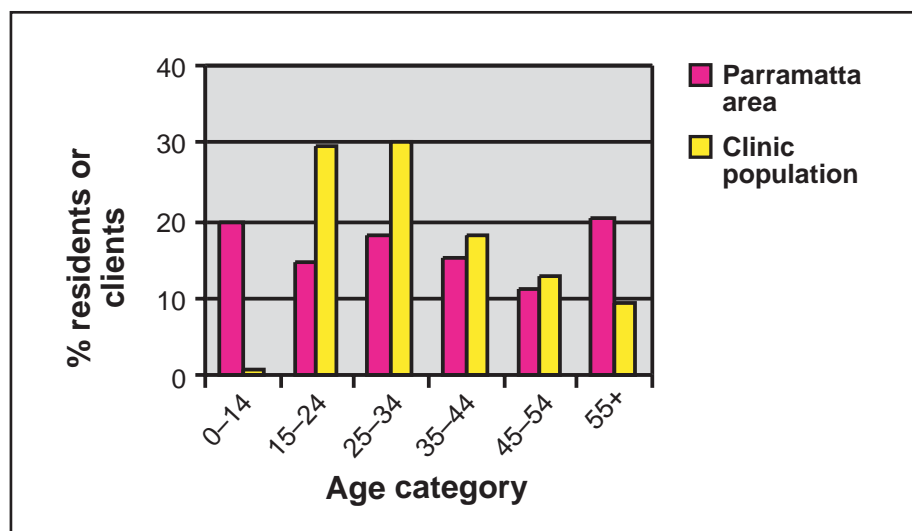


Figure 2. Age profile of Parramatta residents and clients of the sexual health clinic

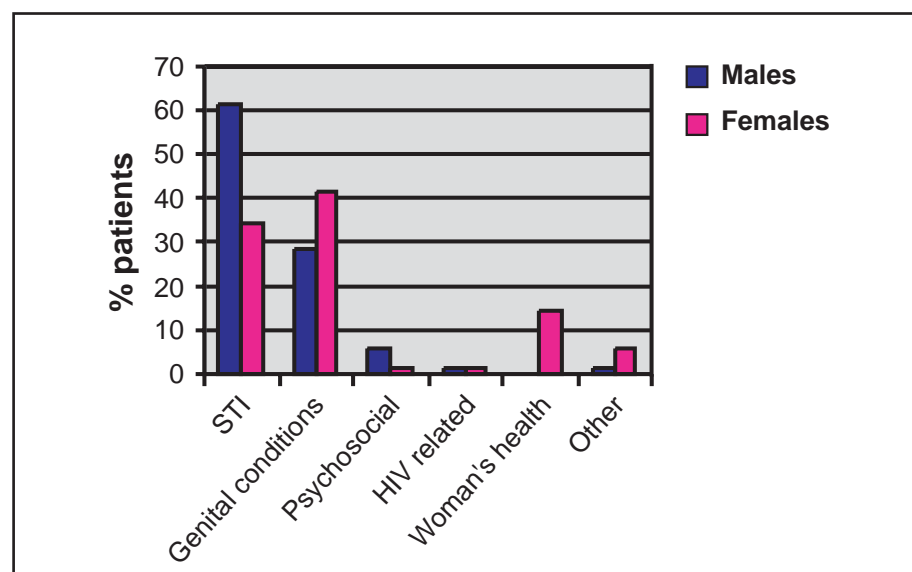


Figure 3. Diagnoses of clinic attendees by gender

diagnoses in men and 19% of diagnoses in women. This is in contrast to the classic bacterial STIs (ie. chlamydia, gonorrhoea and syphilis) that accounted for 8%, 5% and 21% of diagnoses respectively. Of the 1489 Pap smears performed, 37 (2%) showed high grade and 32 (2%) showed low grade intraepithelial abnormalities.

New diagnoses of viral hepatitis (either A, B or C) constituted the tenth commonest diagnosis in both men (n=49) and women (n=45). Of these, chronic hepatitis B or C accounted for 93/94 (99%) of cases. HIV tests were performed on 2877 (47%) of clients. Of those

tested, 1353 (47%) were men and 1524 (53%) were women, with 61 (5%) of men and five (0.3%) women testing HIV positive. Homosexual and bisexual men accounted for 65% (n=43) of positive HIV tests. Of the 364 homosexual and bisexual men attending, 284 (78%) had an HIV test at first visit.

Five hundred and eighty-eight clients received hepatitis B vaccination; 113 received a booster, and of the remaining 475, only 138 (29%) received a full course. Four hundred and thirty-seven clients were classified as high risk for hepatitis B (ie. injecting drug users, sex

workers, men who have sex with men, HIV positive, hepatitis C, and indigenous people) and of these, again only 31% completed the vaccination course.

Discussion

We have described the clinical activity of a large suburban SHC in Australia. Despite many SHCs being located in the suburbs, surprisingly little research exists concerning such clinics and those attending. For instance, a Medline search for 'sex' and 'suburbs' yielded three 'hits', none of which referred to western societies. The socioeconomic background of clients, as assessed by IRDS scores, closely matched that of the NSW population, yet differed markedly from the Sydney metropolitan area. This suggests that inner city and suburban populations may be substantially different and that sexual health services may need to be designed accordingly. Comparative studies with other SHCs would help clarify this.

Consistent with previous research, clients of the SHC were relatively young compared to the entire community.¹³ All age groups were, however, represented suggesting that sexual health is important at all stages of life. This observation should be reflected in health promotion activity, the design of clinic environments and the format of services provided. Contrary to previous studies, women presented at a similar age to men.¹³ Those attending for Pap smears were considerably older than those attending for other reasons. This could be related to the close vicinity of breast screening services.

Country of birth

With 33% of clients born overseas, the clinic was representative of the local population, however, countries of birth did differ. For instance, in Parramatta the commonest country of birth after Australia is Lebanon, but this ranked only eighth in attendees at PSHC. This suggests that sectors of the local community may not be accessing the service and reasons for this need to be explored further. This may be

particularly important, as data from other countries suggest that the incidence of STIs varies between ethnic groups¹⁴ and socioeconomic circumstances are associated with the transmission of STIs.¹² Furthermore, our data only captured country of birth and not ethnicity. Therefore, for example, there were likely to be culturally Lebanese individuals attending PSHC who would have been recorded as born in Australia. Establishing better liaison between clinic doctors and GPs serving the Lebanese community may improve the situation. It would have been useful to assess language spoken at home, as 43 595 (31%) of Parramatta residents' first language is not English.¹¹ Current aids to reduce language barriers include an interpreter service and information leaflets in 19 languages. However, no measures currently exist to attract such people initially, or for those unable to read.

The fact that clients came from over 50 countries suggests the existence of many cultural groups. This is important as attitudes to sex, sexual activity and ability to access sexual health services vary widely between groups. As such, an understanding of these differences is required to attract potential clients into the service, deliver culturally appropriate management and to direct health promotion initiatives to access the entire community. Culture specific strategies such as those used with Aboriginal¹⁵ or gay¹⁶ communities may need to be developed.

Minority groups

A substantial number of minority groups (homosexual and bisexual men, sex workers, clients of sex workers and injecting drug users) attend SHCs and services must be able to respond to the special needs of these groups. Consistent with the prevalence of HIV in the community, homosexual and bisexual men were most likely to have a positive HIV result. Testing rates in this group were high and this may be evidence of appropriate targeting. However, testing rates could still be increased further. Possible strategies to encourage HIV testing could involve

routine six monthly tests of high risk individuals, increased discussion of testing by the GP, nurse or counsellor, together with increased outreach testing facilities.

Women attendees

Data from the UK supports our finding that while men and women access services in approximately similar numbers, the relative proportions vary with the individual condition.¹³ This, combined with the wide range of diagnoses, should be considered in the design and delivery of clinical services. The relatively large number of Pap smear and contraception consultations in women could be a result of the closure of family planning services in the area in 1998. However, the proportion of abnormal Pap smears was higher than that of NSW in general,¹⁷ suggesting that women attending the service have significant sexual health needs. It is worth noting that although many contraceptive methods are currently available, only condoms also provide a degree of protection against STIs.

Diagnoses

Gonorrhoea, chlamydia and syphilis were unusual infections in this community. Instead genital warts and herpes were more common, which is consistent with data from other countries.¹⁸ Australia lacks surveillance of these latter infections, which makes planning decisions difficult. Compared with bacterial infections, genital warts and herpes often require repeated therapies for prolonged periods of time, which impacts on the resources of SHCs. This may have implications for resource provision such as the restructuring of clinics and providing appropriate information in waiting rooms.

HIV infection

Of the 61 men found to be HIV positive, 18 (29.5) were not homosexual or bisexual. This proportion is higher than NSW and Australian figures and may reflect a possible difference between inner city and suburban sexual health.¹⁹

Viral hepatitis

The high number of new diagnoses of viral hepatitis (including hepatitis C) highlights the importance of SHCs in diagnosing these infections, and their role in public health. To date, there are no guidelines describing the specific roles of SHCs in diagnosing and monitoring viral hepatitis. This is important, as many cases of viral hepatitis are not sexually acquired and SHCs may not be the most appropriate sites for diagnosis or management. Consistent with previous research, the low completion rates of hepatitis B vaccination (29%) is of concern as many of these individuals may not have adequate protection.²⁰ Some of our clients were, however, in the middle of their vaccine course and final completion rates may be higher. Strategies used to improve completion of the course of vaccination include: improving recall measures, educating clients about hepatitis risk factors in the context of their behaviour and emphasising the difficulty of treating hepatitis B and C infections.^{21,22} Hepatitis A vaccination is recommended for homosexual men, however, these vaccination data were not analysed in this study.

Limitations of this study

These data do not represent the entire burden of care provided by the PSHC. Return visits, which would have included follow up and new problems, were not described. This is particularly pertinent with regards to chronic problems such as genital warts, genital herpes, HIV, and hepatitis B and C, which typically involve repeated visits. Furthermore, improved data collection will allow more robust data to be used for effective targeting, planning of resources and research opportunities.

A large proportion of clients received a diagnosis at initial presentation, as microscopy is available within the clinic, allowing spot diagnosis of gonorrhoea, trichomoniasis, NGU, candida and bacterial vaginosis. Failure to make a diagnosis at first presentation may be due to a variety of factors including complicated

presentation, routine STI screen or Pap smear, or problems and confusions concerning data entry. The SHIPs database is a significant improvement in facilitating data collection. However, data for conditions such as NGU may be prone to data inputting problems, as it is a presumptive diagnosis at the time of attendance. The number of cases of diagnosed chlamydia was lower than expected, despite the fact that nucleic acid testing technology was available during the study period. It is possible that data inputting problems may be contributing to this observation, or perhaps that chlamydia is less common in this particular group of individuals. Internal diagnostic audits may be required to address possible discrepancies.

General practice and SHCs

General practices are well placed to provide sexual health services. In addition, as testing for STIs is becoming less invasive and more sensitive, the scope for management in general practice is increasing. In this context, it is perhaps worthwhile to explore how the role of SHCs is changing and how liaison between GPs and SHCs can be improved. In addition to specialised expertise, SHCs might usefully contribute in areas such as contact tracing and where the patients concern for confidentiality is particularly high.

Conclusion

As far as we can determine, this is the first attempt at assessing activity at an Australian suburban SHC. Data from inner city SHCs in Australia suggest a markedly different spectrum of conditions such as a much higher incidence of gonorrhoea.²³ It is possible that our data may be more representative of the activity of other suburban SHCs in Australia. Further study, is however needed to confirm this and to allow us to understand the sexual health needs of Australians living in the suburbs. These data provide an additional perspective to the eagerly awaited report of the Australian Sexual

Health and Lifestyle Survey.

Ethics approval

Western Sydney Area Health Service Ethics Committee approved this study.

Conflict of interest: none declared.

SUMMARY OF IMPORTANT POINTS

- Suburban SHCs see patients from diverse backgrounds.
- Patients frequently present with conditions other than STIs.
- The commonest STIs were NGU for men and genital warts for women.
- Greater liaison between SHCs and GPs could improve the sexual health of the general community.

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