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RELATIVE INCIDENCE OF  
SEXUALLY TRANSMITTED DISEASES  
IN NEW YORK CITY  
SOCIAL HYGIENE CLINICS  
1977-1979

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THE recording of statistics of miscellaneous sexually transmitted diseases was introduced into New York City's 13 municipal venereal disease clinics in August 1976. The miscellaneous diseases include pediculosis pubis, trichomoniasis, candidiasis, herpes simplex, tinea, condylomata accuminata, pelvic inflammatory disease, scabies, and molluscum contagiosum. Nongonococcal urethritis, recorded since 1951, was also included. This study examines statistics from 13 New York City clinics and determines the relative incidence of the above diseases for the years 1977-1979, and compares them to those reported in studies from the United States, England, and Sweden.

#### METHODS

*Reporting procedures.* In each of New York City's 13 social hygiene clinics a public health assistant records all diagnoses made by the clinicians during a given day. Regardless of whether treatment is to be given, the appropriate diagnostic code is entered onto the medical chart by the physician (as in the case of herpes simplex). The aide then fills out a clinic case report (form 341C) for all patients on whose charts the examining physician has recorded a diagnosis. Each day these collected reports are forwarded to the Bureau of Venereal Disease Control's Central Registry where the data are hand tabulated before computer storage.

From the information gathered, the data processing unit reports the

incidence of all sexually transmitted diseases to the Bureau and other Department of Health agencies on a monthly, semiannual, and yearly basis. The final annual report from our data center is the source for the New York City statistics appearing in this manuscript.

*Patients.* For clinic attendance figures, the Bureau of Venereal Disease Control relies on the Department of Health's Bureau of Health Statistics and Analysis. Patient visits are categorized by sex and by first visits and revisits. Because revisits include treatment failures, rescreening, second injections, and the like, any reference to patient visits in this text is to the number of first visits recorded.

In 1977 there were a total of 98,363 first visits. This figure rose by 7% in 1978 to 104,914 and by another 1% to 106,666 in 1979.<sup>1</sup> In all three years, first visits by male patients outnumbered those by female patients by almost three to one. The reasons for this predominance of male patients is uncertain but may reflect the large numbers of homosexual men now seen in social hygiene clinics and the preference of many women to attend gynecological or family planning clinics for treatment. The total number of diagnosed cases of sexually transmitted diseases in 1977 was 45,405, or one episode for every 2.2 patient visits during the year.

In 1978 the total number of diagnosed patients was 50,314, or one episode for every 2.1 patient visits. In 1979 the total number was 56,332, which gives one episode for every 1.9 patient visits.<sup>1,8</sup> Studies performed in an Atlanta Clinic for sexually transmitted diseases and in the Denver Metro Health Clinic also report one episode for every two patient visits and 61 and 67%, respectively, of their patients were men as compared to 73% for New York City.<sup>3,4</sup>

## RESULTS AND DISCUSSION

*Relative incidence.* The relative incidence of a sexually transmitted disease is defined as the number of episodes of a particular disease in relation to the total number of patient first visits. Table I shows the frequency and relative incidence ranked in order of highest incidence for the three years 1977 through 1979. Uncomplicated gonorrhea was identified in 27.2% of all patients attending social hygiene clinics in 1977, in 25.4% in 1978, and in 24.7% in 1979. This was the single most common disease regardless of sex.<sup>2</sup> These figures are comparable to those found in other studies: 29% incidence rate for gonococcal infections found in an

## RELATIVE INCIDENCE: VENEREAL DISEASE 1977-1979: SOCIAL HYGIENE CLINICS

	1977			1978			1979			Total No.	Total %			
	Men No.	Women No.	Total No.	Men No.	Women No.	Total No.	Men No.	Women No.	Total No.					
	%	%	%	%	%	%	%	%	%					
Gonorrhea	26,769	27.2	21,643	28.0	5,009	18.0	26,652	25.4	21,632	27.8	4,704	16.3	26,336	24.7
Nongonococcal urethritis	11,998	12.2	14,712	19.0	157	.6	14,869	14.2	17,590	22.6	143	0.5	17,733	16.6
Early syphilis	2,492	2.5	2,001	2.6	443	1.6	2,444	2.3	2,312	3.0	478	1.7	2,790	2.6
Pediculosis pubis	614	0.6	1,017	1.3	264	1.0	1,281	1.2	1,180	1.5	321	1.1	1,501	1.4
Trichomo- niasis	481	0.5	159	0.2	1,057	3.8	1,216	1.2	273	0.4	1,831	6.3	2,105	2.0
Candidiasis	303	0.3	116	0.2	549	2.0	665	0.6	180	0.2	859	3.0	1,039	1.0
Herpes simplex	453	0.5	572	0.7	46	0.2	618	0.6	708	0.9	109	0.4	817	0.8
Tinea	349	0.4	446	0.6	34	0.1	480	0.5	734	0.9	79	0.3	813	0.8
Condylomata acuminata	341	0.4	351	0.5	87	0.3	438	0.4	560	0.7	149	0.5	709	0.7
Scabies	426	0.4	190	0.2	24	0.1	214	0.2	190	0.2	39	0.1	229	0.2
Gonococcal pelvic inflammatory disease	113	0.4	—	—	307	1.1	307	—	—	—	444	1.5	444	—
Molloscum	346	0.4	57	0.1	22	0.1	79	0.1	29	0.0	20	0.1	49	0.0
Contagiosum	30	0.0	44	0.1	1	0.0	45	0.0	109	0.1	2	0.0	111	0.1
Chancroid	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lympho- granuloma venereum	23	0.0	21	0.0	4	0.0	25	0.0	28	0.0	3	0.0	31	0.0
Granuloma inguinale	1	0.0	5	0.0	2	0.0	7	0.0	5	0.0	0	0.0	5	0.0
First visits	72,653	25,710	77,323	27,591	104,914	77,739	28,927	106,666						

Source: New York City Social Hygiene Clinic Summary Reports—December 1978 and 1979.

District Reporting System Reports: 1977, 1978, 1979.

New York City Annual Venereal Disease Reports: 1977, 1978, 1979.

Atlanta clinic, 18% observed in Judson's Denver study, and Wallin's report of 21% in Uppsala, Sweden.<sup>3,4,5</sup>

Nongonococcal urethritis is the second most frequently diagnosed sexually transmitted disease (19.0% in men in 1978, and 22.6% in men in 1979) in our clinics. In 1977 the combined rate was 12.2% as compared to 14.2 and 16.6% for 1978 and 1979, respectively. The results of 1978 and 1979 are similar to Judson's (23%) but lower than the 35% incidence rate in Uppsala.<sup>4,5</sup>

Although several organisms may cause nongonococcal urethritis, *Chlamydia trachomatis* is the only proved etiological agent of this disease, but, for practical purposes, the diagnosis depends on the exclusion of *Neisseria gonorrhoeae* in men with urethritis.

After gonorrhea and nongonococcal urethritis, the relative incidence of the other sexually transmitted diseases drops off sharply. Early infectious syphilis ranks third with a combined rate of 2.5% in 1977, decreasing to 2.3% in 1978, and increasing again to 2.6% in 1979. This gives a gonorrhea-to-syphilis ratio of 11:1 in 1977, 11:1 in 1978, and 9:1 in 1979. While the reported incidence of syphilis is far lower than that of gonorrhea and nongonococcal urethritis, it is still epidemic at this time.<sup>2</sup>

Among women, vaginitis was the second most common diagnosis at 5.6% in 1978 (trichomoniasis 3.8% and candidiasis 2.9%). In 1979 the incidence rate increased to 9.3% (6.3% for trichomoniasis and 3.0% for candidiasis). However, the expected incidence of these diseases, especially trichomoniasis, is far greater than our statistics show. Rein and Chapel in 1975 estimated that 50% of women who have gonorrhea also have trichomoniasis, and that 13-23% of women attending gynecology clinics have trichomoniasis.<sup>6</sup> Judson reports a 7.5% incidence rate in the Denver Metro Clinic.<sup>4</sup> No explanation of the relatively low rate for New York City can be offered without conducting an extensive study in the 13 New York City social hygiene clinics. It should also be noted that while trichomoniasis is usually sexually transmitted and candidiasis is usually not, the recorded incidence in men of these diseases was the same in 1978 (0.2%), and very close in 1979 (0.4% and 0.2% respectively).<sup>2</sup> Further, in England, only 8.2% of trichomoniasis occurred in men, while 13.1% of all trichomonal infections diagnosed in Department of Health clinics during this year were in men.<sup>7</sup>

Due to the severity of long-term complications of gonococcal pelvic inflammatory disease such as recurrent infections, chronic pelvic pain,

ectopic pregnancy, and involuntary sterility, careful attention was paid to this disorder over the last two years. The incidence has been relatively low from 1977 (0.4%) to 1978 (1.1%) to 1979 (1.5%), but is increasing.<sup>2</sup> While this figure is similar to both the Denver study findings and that seen in the Atlanta clinic, most women with symptoms of pelvic inflammatory disease, abdominal pain, and fever, would probably seek treatment at hospital emergency rooms.<sup>3,4</sup> Therefore, social hygiene clinic statistics would not represent an accurate picture of the extent of the problem.

The recorded incidences of pediculosis pubis (0.6%, 1.2%, and 2.9%), herpes simplex (0.5%, 0.6%, and 0.8%), scabies (0.4%, 0.2%, and 0.2%), and molloscum contagiosum (0.4%, 0.1%, and 0.0%) for 1977, 1978, and 1979 respectively, are lower than those reported in any previous survey.<sup>2</sup> Although few data are available on these diseases in the United States, existing literature suggests that we should be seeing higher rates of infection for each of these disorders. Rising incidence may be due, in part, to improved diagnostic expertise. As physicians gain experience in the diagnosis of sexually transmitted disease, they diagnose cases previously missed. Our data suggest that pediculosis pubis and herpes simplex are increasing in incidence, and that scabies and molluscum contagiosum have both decreased. The traditionally minor venereal diseases—chancroid, lymphogranuloma venereum, and granuloma inguinale—remain so with too few cases to produce an incidence rate greater than 0.0% in all three years, although in 1979 the incidence rate for chancroid reached 0.1%. There has been no appreciable change in these figures for a number of years.

#### SUMMARY

The relative incidence of sexually transmitted diseases was compared to the results of other studies. Gonorrhea was most frequent among both sexes and fell from 27.2% (combined) in 1977 to 24.7% (combined) in 1979. Nongonococcal urethritis was second among men in 1978 (19.0%) and in 1979 (22.6%). A breakdown by sex was unavailable for 1977. Vaginitis was second in women in 1978 and 1979. The relative incidence of trichomoniasis in 1978 was 3.8% and in 1979 rose to 6.3%; candidiasis incidence was 2% in 1978 and 3% in 1979. One sexually transmitted disease was recorded for every two first patient visits, consistent with other surveys, but the recorded relative incidences were lower for many

sexually transmitted diseases than those reported in the aforementioned surveys.

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