Incidence of venereal diseases in the Netherlands

H. BIJKERK

Geneeskundige Hoofinspectie van de Volksgezondheid, Leidschendam, The Netherlands

VENEREAL diseases are not notifiable in the Netherlands, but the following data have been obtained from the annual reports of the V.D. clinics, from retrospective enquiries into the incidence of primary and secondary syphilis in general practice for the years 1959, 1963, and 1967, and from a prospective enquiry in dermatological practice for 1967 only.

Until 1959-60 there were many V.D. clinics throughout the Netherlands, but it was then decided to close most of them because they were receiving so few new cases. In 1967 there were seventeen state-aided clinics and four municipal clinics (Fig. 1). In recent years their statistics have thus become less and less representative of the incidence of V.D. in the

country as a whole, and the figures supplied by the general practitioners and dermatologists are therefore more in accordance with the actual situation.

I. Results of retrospective enquiries among general practitioners for the years 1959, 1963, and 1967

Response to the enquiry

The response proved to be excellent; 88, 92, and 89 per cent. of the general practitioners collaborated in the enquiry for the years 1959, 1963, and 1967 respectively. Table I gives the number of patients with primary or secondary syphilis. In 1963, as compared with 1959, there was an increase of over 130 per cent., and in 1967, as compared with 1963, an increase of 40 per cent. It is probable, however, that many cases of 'primary or secondary syphilis' reported by general practitioners were in reality cases of late latent or tertiary syphilis. The twelve general practitioners in the province of Friesland who together reported fifteen patients with primary or secondary syphilis for 1967 were asked by telephone for further diagnostic information, and only one patient ultimately proved to have primary syphilis. The remaining fourteen patients included no less than ten cases of late latent or tertiary syphilis, three of early latent syphilis, and one (an adult woman) of congenital syphilis. It seems unlikely that the twelve practitioners in Friesland differed in their diagnostic standards from their colleagues elsewhere in the country.

TABLE I *Response by general practitioners and reported cases of syphilis, 1959, 1963, 1967*

Year	Total practitioners	Response		Primary and secondary syphilis	
		No.	Per cent.	No.	Rate per 100,000
1959	4,132	3,642	88	204	1.8
1963	4,359	4,025	92	472	3.9
1967	4,408	3,932	89	660	5.2

In setting up these enquiries we perhaps assumed too readily that the general practitioner is sufficiently familiar with what is meant by primary or secondary syphilis. The explanation given on the questionnaire should have been clearer on this point. Despite the shortcomings inherent in such retrospective enquiries, our results indicate that the incidence of early syphilis, and probably also that of gonorrhoea, is still increasing in the Netherlands.

Distribution of patients with primary or secondary syphilis in general practice

Table II shows that the number of general practitioners with cases of syphilis in their practice rose from 149 (4 per cent.) in 1959 to 270 (7 per cent.) in 1963, and to 400 (10 per cent.) in 1967. This increase was observed in all provinces. Table III shows the number of general practitioners who reported one or more cases of syphilis. Of the 400 who reported cases in 1967, 280 (70 per cent.) had observed one case and 352 (88 per cent.) not more than two cases.

TABLE II *General practitioners with cases of syphilis*

Year	Total number responding	General practitioners			
		Without cases		With cases	
		No.	Per cent.	No.	Per cent.
1959	3,642	3,493	96	149	4
1963	4,025	3,755	93	270	7
1967	3,932	3,532	90	400	10

TABLE III *General practitioners reporting cases of syphilis, 1967*

No. of patients	No. of practices
1	280 (70 per cent.)
2	72 (18 per cent.)
3	23
4	10
5	6
6	4
7	1
9	1
10	1
21	1
26	1
Total	400

Cases of primary or secondary syphilis, by age and sex (Table IV, opposite)

The ratio between male and female patients (2.2 : 1 in 1959, 4.0 : 1 in 1963, and 3.2 : 1 in 1967) rose in 1963 and fell again in 1967.

The age distribution shows that in the teenage group (15 to 19 years) there was an increase in accordance with the average national increase, but this increase occurred almost entirely among the boys. Among patients aged between 20 and 29 years the age-specific rate per 100,000 has remained constant; but the males show a decrease and the females an increase. In those aged between 30 and 39 years the number of patients has clearly increased, and for this the male patients are responsible. The group aged

TABLE IV Patients with primary or secondary syphilis, by age and sex

Year			1959			1963			1967		
Sex			Male	Female	Total	Male	Female	Total	Male	Female	Total
No. of cases	Age group (yrs)	0-14	5	7	12	—	—	—	—	1	1
		15-19	10	9	19	18	10	28	27	11	38
		20-29	68	18	86	187	38	225	190	62	252
		30-39	30	22	52	96	31	127	135	30	165
		40-49	15	5	20	29	9	38	56	26	82
		50 and over	12	3	15	22	6	28	50	26	76
		Not known	—	—	—	26	—	26	45	1	46
	Total	140	64	204	378	94	472	503	157	660	
Sex ratio			2.2 : 1			4.0 : 1			3.2 : 1		
Age-specific rates per 100,000 population	Age group (yrs)	0-14	0.3	0.4	0.4	—	—	—	—	0.0	0.0
		15-19	2.2	2.1	2.1	3.2	1.9	2.5	4.6	2.0	3.3
		20-29	8.6	2.3	5.5	22.7	4.8	13.8	19.4	6.8	13.3
		30-39	4.0	2.9	3.4	12.6	4.0	8.3	17.1	4.0	10.7
		40-49	2.3	0.7	1.5	4.3	1.3	2.7	7.8	3.5	5.6
		50 and over	1.0	0.2	0.6	1.6	0.4	1.0	3.5	1.6	2.5
	Total	2.5	1.1	1.8	6.4	1.6	3.9	8.0	2.5	5.2	

40 years and over shows the greatest relative increase, that in women exceeding that in men.

Referral of patients with V.D. to dermatologists and readiness of general practitioners to co-operate in the control of V.D.

Questions designed to investigate to what extent the general practitioners refer or would refer patients with definite or suspected primary or secondary syphilis or gonorrhoea to the dermatologist were included in the 1967 questionnaire. Table V shows that 88.7 per cent. of general practitioners 'as a rule' refer syphilis patients to the dermatologist, 5.7 per cent. 'sometimes', and 2.1 per cent. 'never'. The percentages were quite different with regard to the referral of gonorrhoea patients: 'as a rule' 37.6 per cent., 'sometimes' 35 per cent., 'never' 26 per cent.

TABLE V Referral of cases of syphilis and gonorrhoea to a dermatologist*

Referral of patients to a dermatologist	Syphilis		Gonorrhoea	
	No.	Per cent.	No.	Per cent.
As a rule	3,541	88.7	1,501	37.6
Sometimes	227	5.7	1,395	35.0
Never	83	2.1	1,038	26.0
No opinion or not known	138	3.5	55	1.4
Total	3,989	100	3,989	100

*Including the replies of 57 G.P.s representing a random sample of 12 per cent. among those not responding.

The question about the readiness of the general practitioner to co-operate with an organization for the control of V.D. (Table VI) was posed very carefully. Assuming that in this connection full allowance will be made for the wishes of the patient and the doctor,

85.1 per cent. of the general practitioners were willing in principle to co-operate in this way, 7.5 per cent. rejected such co-operation, and 7.4 per cent. had no opinion or did not answer the question.

TABLE VI Willingness of general practitioners to co-operate with an organization for the control of venereal diseases*

Willing to co-operate	Practitioners	
	No.	Per cent.
Yes	3,394	85.1
No	299	7.5
No opinion or not known	296	7.4
Total	3,989	100

*Including the replies of 57 G.P.s representing a random sample of 12 per cent. among those not responding.

Diagnosis of gonorrhoea and performance of serological tests for syphilis

There was a surprisingly good response to this question, which may have been a rather awkward one for the general practitioner. Table VII shows that 25.6 per cent. of general practitioners 'as a rule' based their diagnosis of gonorrhoea exclusively on clinical signs and history. This percentage is highest (40.7 per cent.) among those who 'as a rule' refer patients with actual or suspected gonorrhoea to a specialist, and lowest (13.7 per cent.) among those who do not or would not do so. These results are not surprising. Among the first group of general practitioners there will be a greater inclination to leave the diagnosis to the dermatologist than among the latter group. 62.4 per cent. of general practitioners stated that their diagnosis of gonorrhoea was 'as a rule' based on the

TABLE VII *Referral of patients with gonorrhoea to a dermatologist, diagnosis of gonorrhoea, and serological tests for syphilis in patients with gonorrhoea**

Percentage referring gonorrhoea patients to a dermatologist		As a rule	Sometimes	Never	No opinion or not known	Total
Diagnosis of gonorrhoea	1. Clinical signs and history	40.7	19.3	13.7	1.8	25.6
	2. Clinical signs, history, and smear	41.5	73.1	80.7	14.5	62.4
	3. Combination of 1 and 2	2.0	4.5	3.6	1.8	3.3
	No experience	12.9	3.0	1.6	36.4	6.8
	Not known	2.9	0.1	0.4	45.5	1.8
	Total	100	100	100	100	100
		1,501	1,395	1,038	55	3,989
Serological tests for syphilis performed on patients with gonorrhoea	As a rule	50.8	52.1	52.7	14.5	51.2
	Sometimes	5.5	27.5	25.0	3.6	18.3
	Never	6.9	18.1	20.5	3.6	14.3
	No opinion	9.5	1.5	1.3	29.1	4.8
	Not known	27.3	0.7	0.6	49.1	11.4
	Total	100	100	100	100	100
		1,501	1,395	1,038	55	3,989

*Including the replies of 57 G.P.s representing a random sample of 12 per cent. of those not responding.

clinical signs, history, and smear. The number who stated that they had no experience in the diagnosis of gonorrhoea was very small (6.8 per cent.). Table VII further shows that 51.2 per cent. of general practitioners 'as a rule' have a serological test for syphilis performed on patients with actual or suspected gonorrhoea who are not referred to a dermatologist. 18.3 per cent. of general practitioners 'sometimes' have a serological test performed on such patients, and 14.3 per cent. 'never'.

II. Results of a prospective enquiry among dermatologists for the year 1967

In December, 1966, all dermatologists were asked to complete a questionnaire for each of their patients with early syphilis* and/or gonorrhoea during 1967

*Including early latent syphilis: no clinical signs, serologically positive, infection contracted less than 5 years ago.

TABLE VIII *Response by dermatologists*

No. of dermatologists	Response to:	No. who responded	
Total 228 In private practice and/or in charge of a clinic 189	Individual prospective questionnaire 118	In private practice + 5 also with clinic	106 (56 per cent.)
		In charge of clinic - 5 also in private practice	12 (6 per cent.)
	Collective retrospective questionnaire 17	WITH VD patients	7 (4 per cent.)
		WITHOUT VD patients	10 (5 per cent.)
	Retrospective telephone inquiry 54	WITH VD patients	43 (23 per cent.)
		WITHOUT VD patients	11 (6 per cent.)

Not in private practice (assistants, etc.) 39

and to send it to the Chief Medical Officer of Health. Their response is analysed in Table VIII.

During the first quarter of 1968, those who had not responded were contacted by telephone in an endeavour to obtain at least an approximate impression of the numbers of their patients. In this way it proved possible to obtain data from all but two practising dermatologists.

If we compare these data with the information obtained from the general practitioners about their referral of patients to the dermatologists, it is clear that the latter gives a more accurate picture of the situation in the Netherlands with regard to early syphilis than with regard to gonorrhoea.

Response to the enquiry

Some dermatologists forwarded data in their capacity as Head of an Out-Patients Clinic for Dermatology

and Venereal Diseases. Seventeen out-patient clinics collaborated in this way. The completeness of the response is not easy to assess, but we have assumed that the respondents kept up their answers to the questionnaire consistently during 1967. The number of cases reported each month fluctuated somewhat, but there is no sign of a downward trend that might suggest 'enquiry fatigue'. Of the 228 dermatologists not registered as 'retired' by the Chief Medical Officer of Health, 106 (46 per cent.) collaborated in the enquiry from their private practice and twelve (5 per cent.) solely as Head of an Out-Patients Clinic. Five Heads of Out-Patient Clinics also reported separately on their cases in private practice. At first it seemed rather disappointing that only half (51 per cent.) had taken part but this difficulty was largely overcome.

To find out the extent of the number of 'missed' patients, the dermatologists who had co-operated during 1967 were requested to provide data on a 'collective' questionnaire. Seventeen complied with this request, and the other 93 were questioned by telephone. The response to these retrospective enquiries converted our initial disappointment into what we feel to be justified optimism about the value of the 'prospective' enquiry. Table VIII shows that, of the 228 dermatologists, 39 proved not to have a private practice and 21 (11 per cent.) of the remaining 189 stated that they had seen no patients with early syphilis and/or gonorrhoea in their practice in 1967. Working on the hypothesis that the dermatologists who returned questionnaires kept this up consistently, it may be concluded that 139 (74 per cent.) including the 21 who asserted that they saw no patients with V.D. supplied complete data. This means that, for the year 1967, a full statement of the number of cases of syphilis and gonorrhoea was obtained from 74 per cent. of dermatological specialists. It seems reasonable to assume that the situation reported would be the same in the other 26 per cent. of practices.

Number of V.D. patients reported

Table IX shows that, of the 3,683 patients reported by the dermatologists, 314 (8.5 per cent.) were suffering from primary or secondary syphilis, 92 (2.5 per cent.) from early latent syphilis, 3,247 (88.2 per cent.) from gonorrhoea, and thirty (0.8 per cent.)

TABLE IX *Number of patients reported by dermatologists*

Total patients 3,683	Primary or secondary syphilis	314 (8.5 per cent.)
	Early latent syphilis	92 (2.5 per cent.)
	Gonorrhoea	3,247 (88.2 per cent.)
	Mixed infections	30 (0.8 per cent.)

from a mixed infection. In Table X, the 3,683 patients are analysed by nationality and domicile, and also by sex, 2,656 (72 per cent.) being Dutch and 1,027 (28 per cent.) foreigners.

Of the 2,656 Dutch patients, 74 per cent. are males and 26 per cent. females. The 1,027 foreign patients (only 2 per cent. females) may be further subdivided

TABLE X *Patients with venereal disease, by nationality and sex*

Total	Nationality	Domicile	Sex	No.	Per cent.
3,683	Dutch 2,656 (72 per cent.)		Male	1,967	74
			Female	689	26
	Foreign 1,027 (28 per cent.)	Netherlands 715 (70 per cent.)	Male	697	97
			Female	18	3
		Abroad 147 (14 per cent.)	Male	146	99
			Female	1	1
		Unknown 165 (16 per cent.)	Male	161	98
			Female	4	2

into 70 per cent. living in the Netherlands and 30 per cent. living abroad (147) or of unknown domicile (165).

Sex ratio

Among the patients with early syphilis there were 5.5 men to 1 woman, and among those with gonorrhoea 4.2 men to 1 woman. The lower ratio among the gonorrhoea patients may be explained by the fact that seamen with gonorrhoea were often treated on board ship and do not appear in the statistics. A report by the British Co-operative Clinical Group (1968) shows a similar difference, and suggests that the high ratio in syphilis patients reflects the larger percentage of male homosexuals among the syphilitics.

Number of V.D. patients by domicile and place of infection

EARLY SYPHILIS

Fig. 2 (overleaf) shows the domicile, place of infection, and sex of the patients with early syphilis.

Among the male patients one quarter of those of Dutch nationality and of the foreigners living in the Netherlands were infected abroad. The proportion of foreigners who were unable to give the place of infection was twice as large as the corresponding group of Dutchmen. Of the remaining foreign

patients, 7 per cent. said they had contracted early syphilis in the Netherlands and 60 per cent. abroad, 33 per cent. being unable to state the place of infection.

The foreign female patients may be ignored, since only two such cases were reported. Of the Dutch female patients, 76 per cent. said they were infected in the Netherlands and 8 per cent. abroad, and 16 per cent. did not know the place of infection.

In Fig. 3 (opposite) those with early syphilis – in so far as they lived or were infected in the Netherlands – are subdivided by municipalities. The four largest cities (Amsterdam, Rotterdam, Utrecht, and The Hague) contain only 18.7 per cent. of the total Dutch male population but 81 per cent. of men infected in the Netherlands said that they contracted early

syphilis there and 59 per cent. of the Dutch male patients lived there. These percentages are even higher for the foreign male patients living in the Netherlands: 67 and 92 per cent. respectively. Among the sixty remaining foreign male patients only four said that they became infected in the Netherlands.

Among the Dutch females with early syphilis the distribution by domicile is much the same, but relatively fewer (69 per cent.) said that they were infected in the four largest cities and relatively more (15 per cent.) said that they were infected in the smaller towns with fewer than 100,000 inhabitants. This is most probably due to the fact that wives are more frequently infected by their husbands, who bring the infection home from the larger cities.

FIG. 2 Percentage patients with early syphilis, by sex, nationality, domicile, and place of infection (reported by dermatologists, 1967)

FIG. 3 Percentage patients with early syphilis, by sex, nationality, domicile in the Netherlands, and place of infection in the Netherlands, 1967

A: Four chief cities, Amsterdam, Rotterdam, Utrecht, and The Hague

B: The other cities of more than 100,000 inhabitants

C: Towns of less than 100,000 inhabitants

D: Not known exactly (but in Netherlands)

GONORRHOEA

Fig. 4 (overleaf) shows that more of the patients with gonorrhoea, both male and female, Dutch and foreigners are infected in the Netherlands. The foreign female patients with gonorrhoea may be ignored in view of the small number of cases (19). Thus 82 per cent. of the Dutch male patients and 88 per cent. of the foreign male patients living in the Netherlands said that they were infected in the Netherlands. Of the remaining foreign male patients 28 per cent., and of the Dutch female patients 92 per cent., said that they were infected in the Netherlands.

In Fig. 5 (overleaf) the patients with gonorrhoea in

so far as they lived or were infected in the Netherlands are subdivided by municipalities.

Of the Dutch male patients, 64 per cent. lived in the four largest cities, and 72 per cent. of those infected in the Netherlands said that they were infected there. Of the foreign male patients living in the Netherlands, 76 per cent. lived in the four largest cities and 82 per cent. said they were infected there.

88 per cent. of the 67 other foreign male patients who were infected in the Netherlands said that they had contracted gonorrhoea in one of these four municipalities. The distribution of the Dutch females with gonorrhoea by domicile and place of infection is much the same as that of those with syphilis.

FIG. 4 Percentage patients with gonorrhoea, by sex, nationality, domicile, and place of infection (reported by dermatologists, 1967)

TABLE XI Male patients who contracted syphilis or gonorrhoea abroad, by nationality and place of infection

Nationality		Dutch				Foreign							
						Domicile in the Netherlands				Domicile abroad or unknown			
Infection		Syphilis		Gonorrhoea		Syphilis		Gonorrhoea		Syphilis		Gonorrhoea	
		No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
Place of infection	Europe	34	60	197	80	9	60	40	85	10	28	97	63
	Africa	5	9	8	3	3	20	3	6	7	19	8	5
	America	16	28	22	9	3	20	1	2	16	44	39	25
	Middle East/Asia	2	4	17	7	—	—	3	6	3	8	9	6
	Australia/New Zealand	—	—	3	1	—	—	—	—	—	—	—	—
Total		57	100	247	100	15	100	47	100	36	100	153	100

FIG. 5 Percentage patients with gonorrhoea, by sex, nationality, domicile in the Netherlands, and place of infection in the Netherlands, 1967. A, B, C, D: as in Fig. 3

COMBINED

Fig. 6 (overleaf) shows the towns where five or more patients (both Dutch and foreign) said that they had contracted early syphilis and/or gonorrhoea; the cities of Amsterdam, Rotterdam, Utrecht, and The Hague, each with more than 100 patients infected, stand out clearly as the chief centres of infection. In Table XI the female patients are omitted because they are so few.

As regards early syphilis, 60 per cent. of the Dutch and foreign patients living in the Netherlands said that they were infected in Europe. For the foreign patients, not domiciled in the Netherlands, this percentage is considerably lower (28 per cent.).

The corresponding percentages for gonorrhoea are 80, 85, and 63 per cent. respectively.

Patients analysed by age and sex

Fig. 7 (overleaf) shows a clear preponderance of the age group 20 to 29 years among both syphilis and gonorrhoea patients. With the exception of the Dutch female patients with gonorrhoea, in whom the age groups 15 to 19 and 30 to 39 years come second and third, the 30 to 39 year group comes second. The foreign male patients with both syphilis and gonorrhoea show a greater preponderance in the younger age groups.

Number of patients per 100,000 inhabitants (age-specific rates)

The national incidence of early syphilis and gonorrhoea calculated from the results of the prospective enquiry among the dermatologists is 3.5 and 26.0 per

FIG. 6 Map of the Netherlands, showing towns and cities where five or more patients were infected with early (primary, secondary, or latent) syphilis and/or gonorrhoea in 1967

TABLE XIII *Patients with syphilis or gonorrhoea, by sex and domicile in the Netherlands*

*Referral of patients to the dermatologists
(Table XIV, overleaf)*

<i>Diagnosis</i>	<i>Sex</i>	<i>Domicile</i>	<i>Incidence per 100,000 population</i>
Early syphilis 436	Male 365	Amsterdam	22·6
		Rotterdam	24·3
		The Hague	12·5
		Utrecht	14·0
		Rest of the country	2·6
	Female 71	Amsterdam	3·4
		Rotterdam	3·1
		The Hague	2·6
		Utrecht	5·0
		Rest of the country	0·6
Gonorrhoea 3,277	Male 2,630	Amsterdam	167·9
		Rotterdam	160·4
		The Hague	115·0
		Utrecht	170·2
		Rest of the country	16·1
	Female 647	Amsterdam	29·3
		Rotterdam	39·1
		The Hague	24·7
		Utrecht	33·2
		Rest of the country	5·1

TABLE XII *Incidence per 100,000 population of patients with syphilis^{1,2} or gonorrhoea,² by sex, domicile,³ nationality, and age (age-specific rates)*

Infection			Syphilis							Gonorrhoea						
Age group (yrs)			0-14	15-19	20-29	30-39	40-49	50 and over	Total	0-14	15-19	20-29	30-39	40-49	50 and over	Total
Nationality	Domicile	Sex														
Dutch	Amsterdam, Rotterdam Hague, Utrecht	Male	—	2.0	32.7	32.9	9.7	3.0	11.6	1.1	56.5	340.3	181.9	59.0	10.4	93.2
		Female	1.2	3.1	9.8	4.4	2.5	1.7	3.1	3.5	60.3	119.2	48.0	11.3	3.9	30.6
	Other municipalities ⁴	Male	—	1.7	6.6	3.2	3.1	0.4	2.0	—	7.2	47.7	22.6	10.8	2.7	12.7
		Female	—	0.9	1.4	1.3	0.7	0.2	0.6	0.4	10.5	17.6	6.6	3.4	0.4	4.9
	Total Netherlands	Male	—	1.7	11.9	8.5	4.5	1.0	3.8	0.2	15.7	106.1	50.8	20.5	4.5	27.7
		Female	0.2	1.3	3.1	1.8	1.1	0.6	1.1	0.9	19.2	37.9	14.0	5.1	1.3	9.9
Total			0.1	1.5	7.6	5.2	2.7	0.8	2.4	0.5	17.4	73.1	32.8	12.7	2.8	18.8
Foreign	Amsterdam, Rotterdam Hague, Utrecht	Male	—	5.0	25.1	23.6	4.2	0.9	8.2	—	45.6	230.2	129.6	13.2	1.5	60.5
		Female	—	—	0.5	—	0.6	—	0.2	—	1.0	4.9	—	0.6	—	0.9
	Other municipalities ⁴	Male	—	0.4	2.0	1.5	—	0.1	0.6	—	1.4	12.0	8.6	2.8	0.2	3.4
		Female	—	—	0.1	0.2	—	—	0.0	—	0.2	0.8	0.3	0.2	—	0.2
	Total Netherlands	Male	—	1.2	6.6	5.4	0.8	0.3	2.0	—	9.1	55.6	30.0	4.9	0.5	14.1
		Female	—	—	0.2	0.1	0.1	—	0.1	—	0.4	1.6	0.3	0.3	—	0.3
Total			—	0.6	3.5	2.8	0.5	0.1	1.0	—	4.4	29.5	15.4	2.5	0.2	7.2
All	Amsterdam, Rotterdam Hague, Utrecht	Male	—	6.9	57.8	56.6	13.9	4.0	19.7	1.1	102.1	570.5	311.5	72.2	11.9	153.7
		Female	1.2	3.1	10.4	4.4	3.1	1.7	3.3	3.5	61.3	124.1	48.0	12.0	3.9	31.5
	Other municipalities ⁴	Male	—	2.1	8.7	4.8	3.1	0.5	2.6	—	8.7	59.7	31.2	13.6	2.9	16.1
		Female	—	0.9	1.5	1.4	0.7	0.2	0.6	0.4	10.7	18.4	6.9	3.6	0.4	5.1
	Total Netherlands	Male	—	2.9	18.5	13.9	5.3	1.3	5.8	0.2	24.8	161.7	80.8	25.4	5.0	41.8
		Female	0.2	1.3	3.3	2.0	1.2	0.6	1.1	0.9	19.6	39.5	14.3	5.4	1.3	10.3
Total			0.1	2.1	11.1	8.1	3.2	0.9	3.5	0.5	22.2	102.6	48.2	15.2	3.0	26.0

1. Primary, secondary, or early latent syphilis.

2. Patients with both early syphilis and gonorrhoea (mixed infections) have been included in both under early syphilis and under gonorrhoea.

3. In principle the domicile of the patients in the Netherlands has been taken for distribution by municipality group; if, however, patients are living abroad or their domicile is unknown, the municipality in which the dermatologist has diagnosed the disease has been taken.

4. Including patients living in the Netherlands whose exact domicile (municipality) is not known.

TABLE XIV *Referral of patients with venereal disease to a dermatologist*

Referred by	Patients reported by dermatologists	
	No.	Per cent.
General practitioner	1,403	38
Specialist	141	4
V.D. clinic	160	4
Other source	285	8
Not referred	1,694	46
Total	3,683	100
No. known to V.D. clinics	2,120	58

patients referred to the dermatologist and of the non-referred patients, 58 per cent. proved to be known to a V.D. clinic. If the patients are then subdivided into Dutch and foreigners, 50 per cent. of the 2,656 Dutch patients (1,325 cases) and 77 per cent. of the 1,027 foreign patients (795 cases) were known to the V.D. clinics. A comparison of Fig. 1

and Fig. 6 clearly shows that the few remaining clinics are situated in the large cities where most of the cases of venereal disease originate.

Source of infection (Table XV, opposite)

DUTCH NATIONALS

Of the married Dutch patients, 21 per cent. of the males and 53 per cent. of the females were infected by the husband or wife; 28 per cent. of the males stated that they had contracted the disease from a prostitute and 2 per cent. from a homosexual partner.

Of the unmarried Dutch patients with a regular partner, 64 per cent. of the males and 85 per cent. of the females said that they had been infected by 'another' regular partner, but the wording of the questionnaire was ambiguous. 5 per cent. of the males said that they were infected by a prostitute and 15 per cent. by a homosexual partner.

Of the other unmarried Dutch males, 25 per cent. said that they had contracted the disease from a prostitute and 20 per cent. from a homosexual contact.

TABLE XV *Percentage patients with venereal disease¹, by nationality, sex, marital status, and source of infection*

		Marital status									
Nationality	Source of infection	Unmarried									
		Married		Regular partner ^a		Regular partner denied or not known		Not known		Total	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Dutch	Marriage partner	21	53	—	—	—	—	—	—	6	23
	Other regular partner	3	6	64	85	—	—	—	—	10	29
	Prostitute	28	—	5	—	25	—	40	—	23	—
	Homosexual partner	2	—	15	—	20	1	20	—	13	0
	Not precisely defined	26	16	11	6	34	61	20	—	28	25
	Combination of partners	2	0	0	—	0	—	—	—	1	0
	Not known	19	24	5	8	21	39	20	—	18	23
	Total	Per cent. No.	100	100	100	100	100	100	100	—	100
		584	294	296	212	1,082	183	5	—	1,967	689
Foreign	Marriage partner	5	44	—	—	—	—	—	—	1	17
	Other regular partner	1	—	62	57	—	—	—	—	4	17
	Prostitute	48	—	7	—	43	—	56	—	42	—
	Homosexual partner	—	—	3	14	3	—	—	—	2	4
	Not precisely defined	10	11	13	—	16	17	—	—	14	9
	Combination of partners	—	—	—	—	0	—	—	—	0	—
	Not known	36	44	15	29	37	83	44	100	36	52
	Total	Per cent. No.	100	100	100	100	100	100	100	100	100
		269	9	61	7	649	6	25	1	1,004	23

1. All patients together

2. Person with whom an intimate relationship exists.

3. The particular question in the questionnaire does not permit of distinguishing for the unmarried patients between the regular partner and another regular partner.

Among the female patients homosexuality was of little significance; only one female patient gave a homosexual contact as the source of infection.

Of the total number of Dutch patients, 6 per cent. of the 1,967 males were infected by their wife, 10 per cent. by another regular partner, 23 per cent. by a prostitute and 13 per cent. by a homosexual partner. Of the 689 females, 23 per cent. were infected by their husband and 29 per cent. by another regular partner.

The partner responsible for the venereal disease in 28 per cent. of the males and 25 per cent. of the females was not further defined. In 18 per cent. of the males and 23 per cent. of the females, the source of infection was not known.

FOREIGNERS

Among the foreign male patients, infection by prostitutes was more frequent. Of the 269 married males, 48 per cent. were infected by prostitutes, of the 61 unmarried males with a regular partner 7 per cent., and of the remaining 649 unmarried males 43 per cent.

Homosexuality was mentioned by the foreigners much more rarely as the source of infection, but this

does not mean that it is necessarily much less frequent.

ALL MALES

Table XVI (overleaf) shows the age and type of infection of male patients infected by prostitutes and homosexual partners. Of 224 Dutch patients with early syphilis, 38 per cent. were listed as homosexual; in the age groups 30 to 39 years and 40 to 49 years the proportion was 48 per cent. Prostitutes were the source of infection in 24 per cent. of the patients; in the age group 20 to 29 years the proportion was 32 per cent. Of the 1,727 Dutch patients with gonorrhoea 10 per cent. were infected by homosexual contacts and 23 per cent. by prostitutes.

Among the 1,004 foreign male patients, 42 per cent. were infected by prostitutes and only 2 per cent. by homosexual contacts.

The problem of repeaters

Fig. 8 (overleaf) shows that 24 per cent. of the Dutch patients with syphilis and 36 per cent. of those with gonorrhoea must be regarded as repeaters, and that male repeaters are twice as numerous as females.

TABLE XVI *Male patients infected by prostitutes or homosexual partners, by age group and nationality*

Nationality	Infection	Source of infection	Age group (yrs)															
			10-14		15-19		20-29		30-39		40-49		50 and over		Not known		Total	
			No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
Dutch	Syphilis ¹	Total	—	—	10	100	108	100	64	100	29	100	12	100	1	100	224	100
		Prostitute Homosexual	—	—	1	10	35	32	10	16	5	17	1	8	1	100	53	24
			—	—	2	20	34	31	31	48	14	48	3	25	—	—	84	38
	Gonorrhoea	Total	1	100	92	100	1,030	100	398	100	144	100	62	100	—	—	1,727	100
		Prostitute Homosexual	—	—	17	18	217	21	109	27	37	26	22	35	—	—	402	23
			—	—	7	8	105	10	47	12	14	10	5	8	—	—	178	10
	Mixed ²	Total	—	—	—	—	8	100	3	100	3	100	2	100	—	—	16	100
		Prostitute Homosexual	—	—	—	—	1	13	1	33	—	—	—	—	—	—	2	13
			—	—	—	—	1	13	1	33	—	—	—	—	—	—	2	13
	Total	Total	1	100	102	100	1,146	100	465	100	176	100	76	100	1	100	1,967	100
Prostitute Homosexual		—	—	18	18	253	22	120	26	42	24	23	30	1	100	457	23	
		—	—	9	9	140	12	79	17	28	16	8	11	—	—	264	13	
Foreign	Syphilis ¹	Total	—	—	6	100	61	100	41	100	6	100	3	100	—	—	117	100
		Prostitute Homosexual	—	—	3	50	28	46	17	41	4	67	2	67	—	—	54	46
			—	—	1	17	2	3	1	2	—	—	—	—	—	4	3	
	Gonorrhoea	Total	—	—	52	100	540	100	235	100	35	100	6	100	11	100	879	100
		Prostitute Homosexual	—	—	33	63	211	39	102	43	13	37	2	33	4	36	365	42
			—	—	1	2	14	3	3	1	1	3	—	—	—	—	19	2
	Mixed ²	Total	—	—	1	100	4	100	2	100	—	—	1	100	—	—	8	100
		Prostitute Homosexual	—	—	1	100	3	75	2	100	—	—	1	100	—	—	7	88
			—	—	—	—	—	—	—	—	—	—	0	—	—	—	—	—
	Total	Total	—	—	59	100	605	100	278	100	41	100	10	100	11	100	1,004	100
Prostitute Homosexual		—	—	37	63	242	40	121	44	17	41	5	50	4	36	426	42	
		—	—	2	3	16	3	4	1	1	2	—	—	—	—	23	2	

1. Primary, secondary, or early latent syphilis.

2. Early syphilis and gonorrhoea.

The largest proportion of repeaters were those with a history of gonorrhoea. It is possible that syphilis patients with a previous history of syphilis were in fact defaulters. Although the percentages of foreign repeaters are similar to those of Dutch nationals, the actual numbers are probably higher, because of the difficulty of obtaining an accurate history.

Conclusions

The following information has emerged from the results of this enquiry:

(1) Most patients live and become infected in the four largest municipalities, Amsterdam, Rotterdam, Utrecht, and The Hague, especially the first two.

(2) Foreigners, notably those employed in the Netherlands, and seafarers form a highly vulnerable group.

(3) Male homosexuals run a grave risk of contracting V.D.

(4) Prostitutes are still an important source of infection.

(5) The patients include a large number of repeaters.

FIG. 8 Percentage patients with previous history of syphilis and/or gonorrhoea ('repeaters'), by nationality and sex, reported by dermatologists in 1967 (actual total numbers in parenthesis)