

# Sexually transmitted diseases in Italy: clinical returns versus statutory notifications

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## Abstract

**Sexually Transmitted Diseases (STD) surveillance has caught the attention of the Italian public health authorities during the past decades. The spread of HIV infection increased the awareness of the need for a better STD surveillance system. This paper reports a retrospective survey of STD clinics in Italy, intended to form an epidemiological base for further development of STD surveillance. The data for 1986-87 and 1988 on a predefined set of diseases, all of them sexually transmitted, were collected from 85 of 127 centres contacted. The data obtained offer the first national figures for some STD not included in the statutory notification list, such as chlamydial infection, herpes and genital warts, as well as HIV infections. Those data show an increase in time frequencies. For gonorrhoea and syphilis, it was possible to compare our data with statutory notifications, showing a large gap between notified and reported cases. This gap is not stable in time (increasing in time) or in geographical area (increasing from north to south).**

## Introduction

The relevance of STD in public health has increased dramatically in recent years. This change has been a consequence of a number of factors which include: modifications in the pattern of this group of diseases, awareness of the worrying sequelae of some STD (infertility, perinatal mortality, infant morbidity and cancer),<sup>1,2</sup> and the recent correlation found between STD and HIV infection.<sup>3-7</sup> As a result, an increasing need for reliable data, both for effective epidemiological surveillance and for prevention strategies, has emerged.<sup>8,9</sup>

The Italian compulsory notifiable infectious dis-

eases list, published by the National Institute of Statistics (Istituto Nazionale di Statistica, ISTAT) includes four STD, the rates of which should be representative of the national STD situation for both geographical distribution and temporary trends. However, the four notified pathologies (syphilis, gonorrhoea, lymphogranuloma venereum and chancroid) are inadequate for monitoring STD. Some of them have almost completely disappeared, while other diseases which are progressively expanding (*Chlamydia trachomatis* infections, herpes genitalis, genital warts, non gonococcal genital infections, etc) are not even considered in this list. Moreover, there seems to be considerable under-reporting in the Italian rates for syphilis and gonorrhoea in comparison with other European countries (5 to 50 times lower, respectively, for 1987)<sup>10</sup> and with the United States (10 to 150 times lower, respectively, for the same year).<sup>11</sup>

The considerations described above prompted us to take a national survey of STD clinics to verify whether data reported were qualitatively and quantitatively representative of the Italian STD situation. This study concerns the analysis of data obtained about such STD and their comparison with statutory notifications.

## Methods

The list of STD centres, updated to 1988, was provided by the National Dermovenereological Association. In June 1989, a questionnaire was sent to the director of each centre; a second mailing was sent to those who did not answer after three months from the first mailing. The "non-responder" centres were subsequently all contacted by telephone.

The questionnaire investigates the organisation of the centre and the number of new diagnoses seen yearly in the previous three years (86-88) for six diseases, with the following case definitions:

- Confirmed gonorrhoea infections of all sites;
- Primary and secondary syphilis;
- Symptomatic, confirmed chlamydial infections;
- Confirmed HIV seropositivity;
- First clinical episode confirmed herpes genitalis infections;
- Human papilloma virus infections, including clinically confirmed cases.

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Table 1 New cases in 85 Italian STD clinics (Frequencies)

	Gono	Syph	Chlamy	HIV	HSV2	Condi	Vis M	Vis F	Vis total
North									
1986	825	2051	802	636	422	3367	33160	18098	51258
1987	561	1837	913	1164	486	3548	38024	19057	57081
1988	467	1464	916	1658	698	4545	39455	19387	58842
Central									
1986	407	493	393	149	238	841	11023	4166	15189
1987	257	347	586	130	253	921	10405	4548	14953
1988	209	437	415	162	172	916	11296	7016	18312
South									
1986	315	424	470	36	328	1180	11741	5696	17437
1987	310	416	495	128	357	1189	12714	6278	18992
1988	315	449	512	112	382	1362	14982	8205	23187
Italy									
1986	1547	2968	1665	820	988	5388	55924	27960	83884
1987	1128	2600	1904	1427	1096	5658	61143	29883	91026
1988	991	2350	1843	2052	1252	6823	65733	34608	100341

The total number of visits performed each year was also registered. Each centre was asked to declare the routine laboratory methods used to confirm the above mentioned diseases.

Questionnaires were manually checked and put into a specifically programmed computer data-base: questionnaires from centres declaring themselves not active as STD clinics or reporting zero cases were not used.

Statutory notifications for gonorrhoea and syphilis were obtained from ISTAT<sup>12</sup>: the notifications' case definitions are "gonorrhoea infections" and "syphilis with active contagious lesions", without further specifications.

## Results

Out of the 127 centres contacted, 57 responded to the first questionnaire. The second mailing accounted for 44 more centres. There was a final response of 101

centres. Out of the 26 non-responder centres, 24 reported they were not STD clinics but only dermatological services and 2 were not identified. Of the 101 responding centres, 16 were no longer active STD clinics, so they were excluded from this analysis. Eighty five STD clinics remained as the basis for the present study.

The new cases collected, by year, for each disease in the 85 STD clinics are shown in table 1. A large geographical area aggregation has been performed. The last column includes the total number of visits performed in the centres: it is *not* the sum of reported cases.

A decreasing trend appears for gonorrhoea and syphilis, together with a stable or increasing trend for the other infections. The trend for gonorrhoea and syphilis is compatible with the trend of statutory notifications (fig 1).

Table 2 shows the comparison, by year and area, of statutory notifications versus clinical returns for syphilis and gonorrhoea, and the ratio of diagnoses to notifications.

Many of the cases included in the clinical returns are not present in the notifications: overall in 1988 the clinical returns have 90% more cases of gonorrhoea and 131% more of syphilis than statutory notifications. This gap is different by geographical area and increases in time. As can be seen in table 2, the ratio for gonorrhoea goes from 1.17 in 1986 to 1.95 in 1988, and for syphilis the ratio is 1.46 in 1986 and 2.36 in 1988. Figure 2 shows the ratios of gonorrhoea and syphilis for 1988.

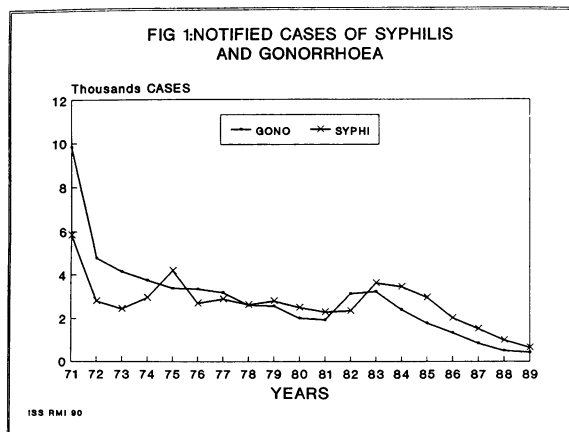


Figure 1 Trend of statutory notifications for gonorrhoea and syphilis in Italy (1971–1989).

## Discussion

The tendency to gloss over STD has met the growing demand for behavioural freedom of choice; however, this freedom has been misinterpreted, leading to a disregard of the seriousness of STD. The spread of HIV infection has once again focused the attention of

Table 2 New cases in Italian STD clinics compared with notifications by geographic area frequencies and ratios diagnoses/notifications

	Year	Gono ratio			Syphi ratio		
		Not	Dia	D/N	Not	Dia	D/N
North	1986	836	825	0.99	1351	2051	1.52
	1987	566	561	0.99	894	1837	2.05
	1988	355	467	1.32	555	1464	2.64
Central	1986	360	407	1.13	532	493	0.93
	1987	199	257	1.29	486	347	0.71
	1988	132	209	1.58	346	437	1.26
South	1986	126	315	2.50	146	424	2.90
	1987	73	310	4.25	137	416	3.04
	1988	22	315	14.32	94	449	4.78
Total Italy	1986	1322	1547	1.17	2029	2968	1.46
	1987	838	1128	1.35	1517	2600	1.71
	1988	509	991	1.95	995	2350	2.36

health care authorities on STD and has made financial resources available for STD surveillance. Moreover, the identification of the STD clinics' patients as one of the most appropriate sentinel groups for monitoring HIV trend has led to the establishment of a specific STD surveillance network in Italy, which has been modelled on those of other European countries.

This study offers for the first time national figures for chlamydial infections, herpes infections and genital warts. For syphilis and gonorrhoea, the comparison between the statutory notifications and our data shows an important gap: for each case of notified syphilis there are 2.3 unnotified; similarly, for each case of gonorrhoea notified there are two cases unnotified. This gap is not stable in time or geographical area: the proportion of cases not notified increases in-time and follows a north-south trend, reaching astonishing peaks in Southern Italy, where the results show 14 cases of unnotified gonorrhoea for each notified case.

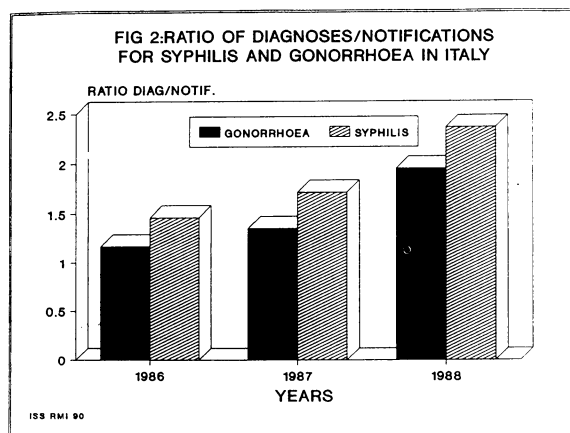


Figure 2. Ratio of clinical returns and statutory notifications for gonorrhoea and syphilis in 1988 in Italy.

It must be emphasised that public centres are more likely to report infectious diseases. Nevertheless, ISTAT data are underestimated if compared with data provided by the STD centres (all of them public), suggesting that patients seen by private physicians or other private clinical settings are not included in the mandatory notifications. This indicates that the magnitude of undernotification exceeds the gap seen in the present study. Furthermore, figures collected by the 85 STD centres are only a part of the real STD picture in Italy. This is confirmed, at least for gonorrhoea, by a study on spectinomycin prescriptions dispensed in Rome, in the Lazio Region, during 1985-87 (personal communication: Marina Maggini, 1989): the number of subjects who had a spectinomycin prescription by a general physician in Rome is 5.4 times greater than notifications reported for the whole Lazio Region (ISTAT) in those three years.

Our data show that the very relevant notification decrease for syphilis and gonorrhoea does not reflect the true situation. We found only a 36% and 21% decrease in gonorrhoea and syphilis, respectively, between 1986 and 1988, compared with the 61% and 51% decrease shown in the statutory notifications. It may well be that the arrival of the HIV infected population, with the extensive follow-up of paperwork and bureaucracy for those patients, has reduced the attention given to classical STD notification.

As a result of this study, a routine surveillance network based on clinical returns is now operational in 36 large STD clinics in Italy. Moreover, the government has noted the STD problem and has proposed a law aimed at STD control. This is a good starting point for finding and enhancing adequate means for surveillance in an area that is of paramount importance in improving individual life.

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