

# Dermato-Venereology in the Nordic Countries

## Reporting System for Sexually Transmitted Infections and HIV in Finland

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### History of the reporting system in Finland

Cases of gonorrhoea and syphilis have been reported by physicians in Finland for several decades. For Chlamydia, however, this has been ongoing only from 1987, until 1998, when physician notification ceased to be a requirement.

In 1994, the Finnish National Infectious Diseases Register (NIDR) was formally established at the National Public Health Institute in Helsinki (KTL). From this time, it also became mandatory for clinical microbiology laboratories to provide the NIDR with data on laboratory-confirmed cases of gonorrhoea, syphilis and Chlamydia trachomatis (1).

Reporting results of HIV tests to the NIDR has been required in Finland since 1985 (2). Both laboratory and physician notifications are required.

### Today

For gonorrhoea, syphilis and HIV infection, the NIDR receives physician notifications via regional registers in 21–22 hospital districts. For these infections and Chlamydia, data are received from clinical microbiology laboratories. More than 75% of laboratory reports are sent directly to KTL electronically, and all notifications from physicians are received on paper. The NIDR links notifications and laboratory reports automatically via individual identity codes or a combination of name, date of birth, gender and municipality of treatment.

### Confidentiality

In Finland each person has an identity code, which is a combination of their date of birth and gender, plus a random sequence of numbers and/or letters. Thus if a notification only contains an identity code, the patient's age and gender will be automatically calculated upon data entry.

Patient identification data are strictly confidential according to Finnish law. Personal identifiers (such as name, identity code, date of birth) only remain on the national database for a limited time, which varies depending on the disease (e.g. 3 months for gonorrhoea and Chlamydia vs 50 years for long-term infections such as HIV and syphilis). All paper forms are destroyed after 1 year. From 2004, identity codes are

to be kept on the system indefinitely, but in a 'blind' (secure, with limited access) form, in order to permit links to other disease registers in the future.

Once the data are entered into the database, they remain there in their original format. If errors are discovered, a further (correct) notification is added and flagged for use by the system. The original (incorrect) notification is archived for data validation and remains fully traceable.

### Type of information collected

As mentioned above, it is mandatory to report reportable sexually transmitted infections (STIs) in Finland after microbiological confirmation from a laboratory, while syphilis, gonorrhoea and HIV infection require additional physician notification. Patients' age, gender, nationality and place of residence are requested on all notifications, while the physician's notification also includes information on possible country of acquisition of infection, and actions taken to notify partner(s), if any (3). All of the NIDR data can be viewed in aggregate form as monthly reports on the KTL website ([www.ktl.fi](http://www.ktl.fi)).

### Sentinel STI surveillance system

Since 1995, the NIDR data have been complemented by a sentinel network of STIs, which collects more data on

patient characteristics for STIs including HIV infection. The network consists of six STIs and two gynaecology clinics, plus three healthcare and two student healthcare centres around the country.

In addition to data collected on all of the reportable STIs collected by the NIDR, the sentinel system collects information on genital herpes simplex and human papillomavirus infections (3). Data are primarily for local and network use. If aggregated for use outside of the treating clinic, all patient identifiers are removed.

### Epidemiology of STIs and HIV in Finland

Although a large country, Finland has a small population of approximately 5 million. Until 1994, the number of cases of syphilis reported remained well below 100/year. In 1995, however, associated with an increase of syphilis in neighbouring Russia, and due to an outbreak, 169 cases were notified (an incidence of 3.28/100 000; Fig. 1). This was an increase of nearly three times compared to the previous year. Since then, the number of syphilis cases diagnosed annually in Finland has remained over 150, apart from 1999, when there were 140 cases (2). Corresponding incidence rates have fluctuated between 2.46 and 4.25 per 100 000/year (Fig. 1). In contrast, the number of cases of gonorrhoea notified to the NIDR has declined steadily from over 2000 cases in 1989 to just over 200 in 1996, and

has remained relatively stable, with an incidence of between 4 and 5/100 000/year until 2002 (2, 4, 5) (Fig. 1; data for 2003 are provisional).

There has been a marked and consistent increase in the number of cases and the incidence of Chlamydia diagnosed since 1995 (Fig. 1). More than half of the Chlamydia cases are in women and about one third are very young (<20 years old; data not shown). Chlamydia notifications are by far the highest for any STI notified in Finland, reaching a peak of 13 661 new laboratory-confirmed cases in 2002 (an incidence of 262.97/100 000 for that year); an increase of 12.5% compared to 2001 (4, 5). Some of this increase may be due to more screening for this disease in Finland, as well as increased use of more sensitive new diagnostic tests which use urine as the sample (2).

The number of cases of HIV notified to the NIDR annually since 1985 has increased steadily to a peak of 145 cases in 2000 (incidence 2.8/100 000) (6). Since then, however, numbers and incidence have remained relatively stable (Fig. 2). Changes have been seen in routes of transmission since the 1980s and early 1990s, when between 5 and 20% of cases were in people born outside of Finland, and more than half of all cases had acquired HIV through homosexual transmission. Now, since the mid-late 1990s, approximately one third of all cases are in those born outside Finland, while only about 20% of cases are from homosexual transmission. The number acquiring infection via intravenous drug use, previously very small, now comprises about 20% of cases. Very few children in Finland are reported with HIV infection (2).

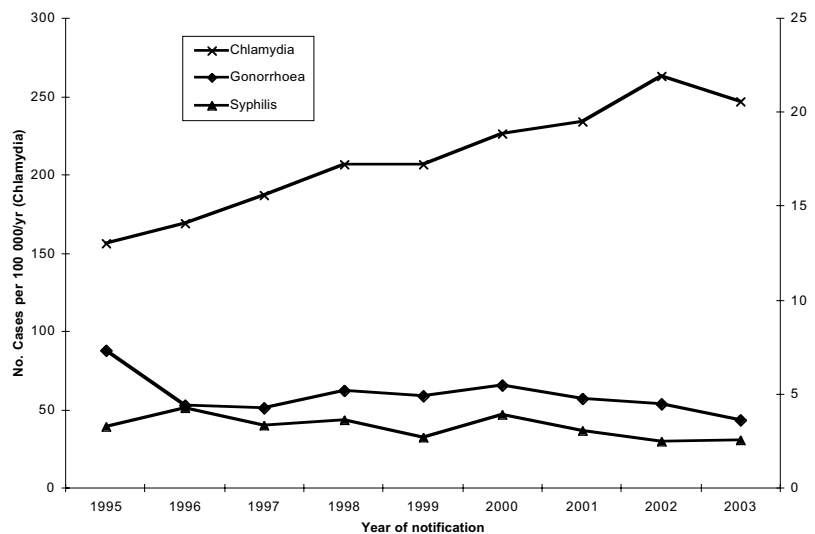


Fig. 1. Number of cases per 100 000/yr of Chlamydia, gonorrhoea & syphilis notified to the NIDR in Finland, 1995-2003 (data for 2003 are provisional).

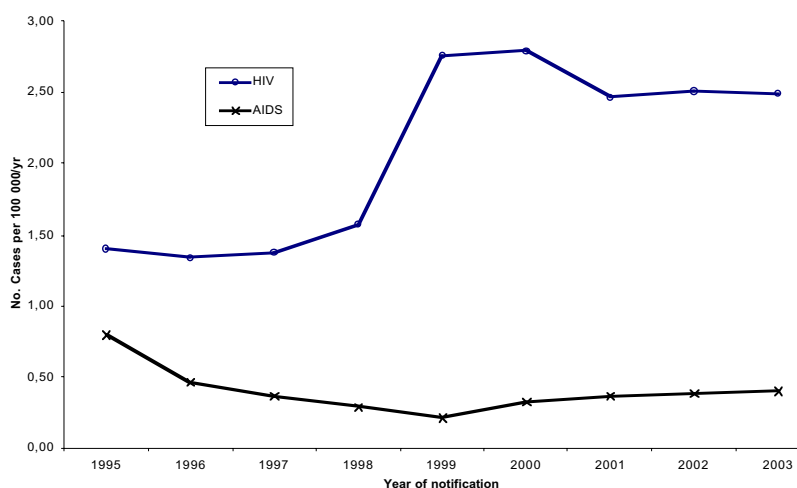


Fig. 2. Number of cases per 100 000/yr of HIV & AIDS notified to the NIDR in Finland, 1995-2003 (data for 2003 are provisional).

The number of AIDS cases reported annually has decreased from a peak of 43 in 1994 to an average of 20 (with corresponding incidence below 0.5/100 000/year) over the past 3 years (2,4,5) (Fig. 2). This was expected as a result of the introduction of highly active anti-retroviral therapy in the 1990s.

## Discussion

Finland, although relatively isolated in the north and with a smaller and less mobile population than many other countries in the rest of Europe, today has very open borders to neighbouring Russia. Much travel to

Finland from former Soviet Union countries with deteriorating communicable disease situations has ensued. As a result, Finland has seen increases in some STI in recent years, most notable of these have been Chlamydia, which appears to affect mostly the younger population. Without a timely STI reporting system, these trends might not have been realised and no effective action could have been taken. The sentinel surveillance system adds additional information on risk factors at a local level, useful in outbreak investigations and in planning preventive action for the future.

A thorough evaluation of this reporting system, including the sentinel system, is currently underway. Recommendations from this evaluation will help to provide valuable feedback to the users, and potentially, information with which to further improve the system. As a result, Finland should continue to monitor trends in STIs, while maintaining an efficient system for outbreak detection and planning for STI prevention well into the future.

## References

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