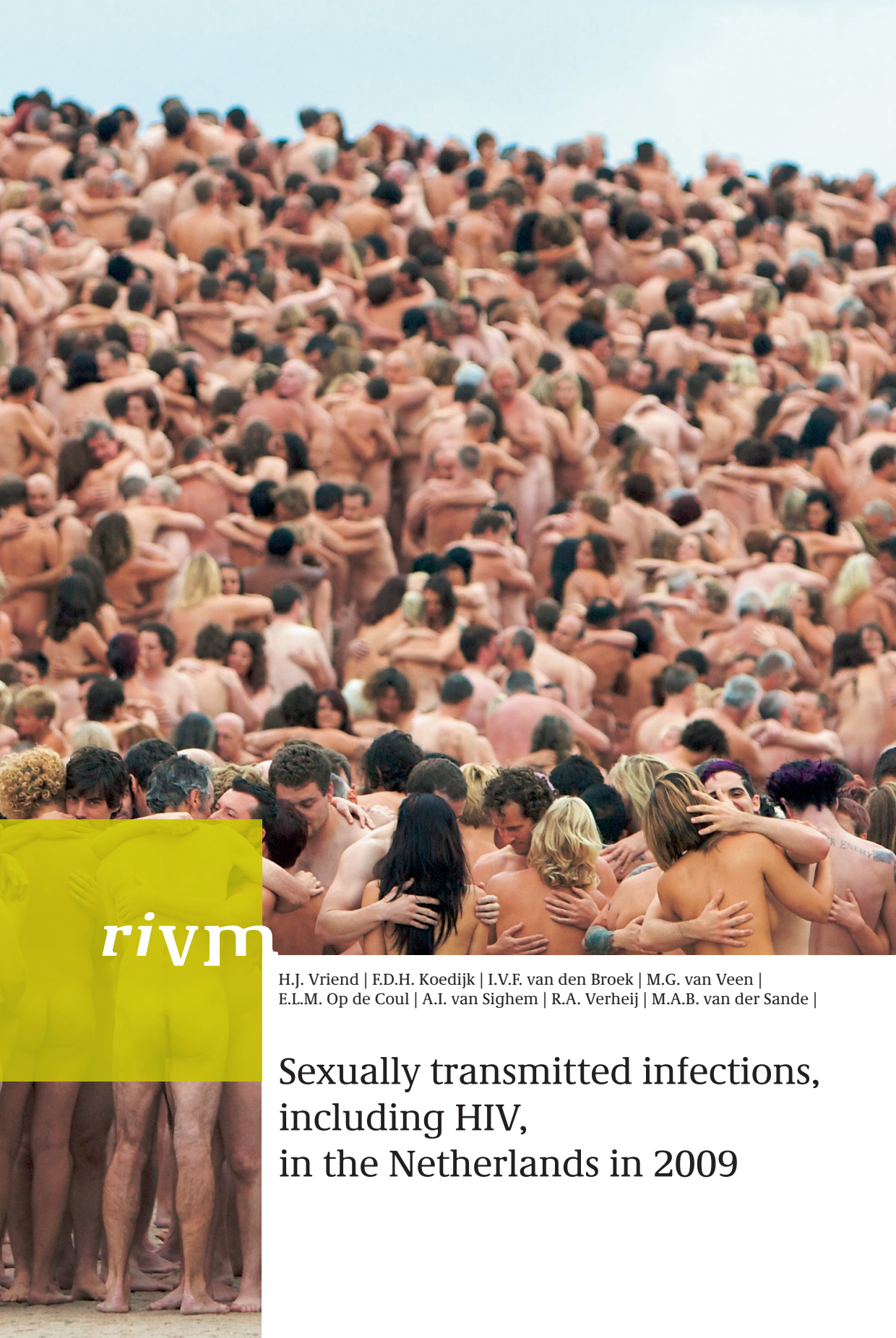




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Sexually transmitted infections, including HIV, in the Netherlands in 2009

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In collaboration with:

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ISIS/OSIRIS

A publication by the

National Institute for Public Health and the Environment

P.O. Box 1

3720 BA Bilthoven

The Netherlands

www.rivm.nl

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RIVM report number: 210261007/2010

ISBN 978-90-6960-243-1

Rapport in het kort

Seksueel overdraagbare aandoeningen, waaronder hiv, in Nederland in 2009

Chlamydia

Met bijna 10.000 nieuwe infecties in 2009 blijft chlamydia de meest gediagnosticeerde seksueel overdraagbare aandoening (soa) van alle bezoekers van de soa-centra. Het aantal infecties is toegenomen, maar het percentage mensen met chlamydia is stabiel gebleven. Elf procent van de heteroseksuele bezoekers van de soa-centra had een chlamydia-infectie, onder heteroseksuelen jonger dan 25 jaar was dit 14 procent.

Gonorrroe

Het aantal en percentage positieve gonorrroe-infecties is opvallend gestegen ten opzichte van 2008. Dit heeft grotendeels te maken met een stijging van het aantal gonorrroe-diagnoses bij mannen die seks hebben met mannen (MSM) met 28 procent. Vooral het percentage positieve orale gonorrroe testen bij MSM nam toe. Opvallend is dat steeds meer gonorrroestammen minder gevoelig zijn voor antibiotica.

Syfilis

In 2009 nam het aantal nieuwe syfilis-diagnoses af met 15 procent ten opzichte van 2008, het percentage positieve testen daalde ook. Deze daling is ook op de langere termijn zichtbaar. Syfilis werd vooral gediagnosticeerd bij MSM (89 procent van alle syfilis-diagnoses).

Hiv

Zowel het aantal als het percentage positieve hiv-testen bij de soa-centra is in 2009 opnieuw licht gedaald. Sinds 1 januari 2010 wordt iedereen op hiv getest, tenzij mensen dat expliciet weigeren (opting-out testing). Overigens werd in 2009 al 92 procent van alle bezoekers die niet wisten of ze hiv hadden getest. In 2009 werd bij 34 procent van de bekend hiv-positieve MSM een of meerdere soa gevonden.

Bezoekers soa-centra

In 2009 hebben in totaal 93.331 mensen zich bij een van de soa-centra in Nederland laten testen op soa. Dat is 6 procent meer dan in 2008. Er kwamen vooral meer MSM, een stijging van 19 procent ten opzichte van 2008. Bij 13 procent van de bezoekers werd een of meerdere soa gevonden (bij 20 procent van de MSM en 12 procent van de heteroseksuele bezoekers). Dit is vergelijkbaar met voorgaande jaren.

Abstract

Sexually Transmitted Infections, including HIV, in the Netherlands in 2009

Chlamydia

Chlamydia remains the sexually transmitted infection (STI) diagnosed most often among STI clinic attendees, with almost 10,000 new infections reported in 2009. Whilst there was an increase in the numbers of infections that occurred, the positivity rate remained stable. Of the total heterosexual STI clinic attendees, 11 per cent had a chlamydia infection compared with 14 per cent in the group of heterosexuals younger than 25 years.

Gonorrhoea

The number of gonorrhoea infections and the positivity rate has increased substantially compared with 2008. The main cause is the increase (28 percent) in gonorrhoea diagnoses in men having sex with men (MSM). In particular, the percentage of positive oral gonorrhoea tests among MSM increased. Notable here is the increase in gonorrhoea strains which are less sensitive to antibiotics.

Syphilis

In 2009, the number of new diagnoses of syphilis decreased by 15 per cent compared with 2008. The percentage of positive tests also decreased. This decline is also visible in the long term trend. Syphilis in MSM accounted for 89 per cent of all syphilis diagnoses.

HIV

There was again a slight decline in the number and proportion of positive HIV tests at the STI clinics. Since January 1st 2010, all STI clinic attendees have been tested for HIV, except those who explicitly refused, known as opting out testing. In 2009, 92 per cent of all STI clinic attendees who did not know their HIV status were tested for HIV. Among those MSM known to be HIV positive, 34 per cent were diagnosed with one or more STI in 2009.

STI clinic attendees

In 2009, a total of 93,331 persons were tested at one of the STI clinics in the Netherlands. This was 6 per cent more than in 2008. There were especially more MSM who visited an STI clinic in 2009, an increase of 19 per cent compared with 2008. One or more STI was found in 13 per cent of the attendees (in 20 per cent of MSM and in 12 per cent of heterosexual attendees). These figures are comparable with previous years.

Preface

This annual report presents the national surveillance data and a review of the epidemiology of sexually transmitted infections (STI), including HIV/AIDS, in the Netherlands in 2009. The report aims to produce an overview of recent trends and current developments in the field of STI. This is done by presenting a summary of recent trends ('key points') followed by tabulations and figures of STI by a range of relevant characteristics and risk groups over time from data sources available.

We hope that this report contributes to further awareness of the distribution and determinants of STI, including HIV, in the Netherlands, resulting in further targeting of (preventive) interventions and assessment of their effectiveness on STI transmission. The information is directed at policy makers, researchers in the field of STI and related subjects as well as others interested in STI trends in the Netherlands. More information on STI and HIV in the Netherlands is available at www.soahiv.nl and www.hiv-monitoring.nl. A copy of this report can also be downloaded in PDF format from www.soahiv.nl.

Acknowledgements

We gratefully acknowledge the cooperation of many physicians, public health doctors and nurses, microbiologists, epidemiologists, dermatologists, behavioural scientists, prevention workers and other professionals working in the field of STI and HIV. We would like to thank the following organisations for their continuing collaboration in collecting data: the STI centres (STI clinics and municipal health services), Stichting HIV Monitoring (SHM) and GGD Nederland. We also thank SOA AIDS Nederland, Rutgers Nisso Group, HIV Vereniging, Schorer Stichting, Netherlands Institute for Health Services Research (NIVEL), in particular the Information Network of General Practice (LINH), Dutch Working Group on Clinical Virology, the Chlamydia Screening Implementation group (CSI), as well as the other units at the Centre for Infectious Disease Control: Laboratory for Infectious Disease and Screening (LIS), the Policy, Management and Advice Unit and the Preparedness and Response Unit for their support. Furthermore, we would like to thank Katie Greenland (EPIET) for her contribution to the analysis of HIV surveillance data, Silke David for the Sense data and Petra Oomen for the data on pregnant women (Praeventis). Also, Han de Neeling, Daan Notermans and Tineke Herremans (all LIS) are thanked for their contributions.

Further information

Any comments or suggestions can be sent to soahiv@rivm.nl.

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Samenvatting

In 2009 werden in totaal 93.331 nieuwe soa-consulten uitgevoerd bij de soa-centra, een stijging van 6 procent ten opzichte van 2008. De soa-centra zijn bestemd voor hoog-risicogroepen die in de reguliere zorg niet voldoende bereikt worden. Om deze groepen te bereiken passen zij een landelijk afgestemd triagesysteem toe. De hoogrisicogroepen, waaronder MSM (19 procent van de bezoekers in 2009), personen afkomstig uit soa/hiv endemische gebieden (12 procent van de bezoekers in 2009) en jongeren tot 25 jaar (40 procent van de bezoekers in 2009), worden gratis en indien wenselijk anoniem getest. In 2009 voldeed 96 procent van de soa-consulten aan de gestelde criteria voor hoogrisicogroepen of gaf aan anoniem getest te willen worden.

Naast data van de soa-centra worden, waar beschikbaar, trenddata uit de reguliere zorg (huisarts, hiv-behandelaren) en andere surveillance bronnen gerapporteerd.

Bacteriële soa

In 2009 was chlamydia opnieuw de meest gediagnosticeerde bacteriële soa in de soa-centra met 9.771 gerapporteerde gevallen. Het percentage positieve testen bleef stabiel, 10,5 procent in 2009 ten opzichte van 10,8 procent in 2008. Het hoogste percentage positieve testen werd gezien onder heteroseksuelen mannen (10,8 procent). De meerderheid van de chlamydia infecties bij heteroseksuelen werd bij jongeren onder de 25 jaar gediagnosticeerd (52 procent). LGV, een agressieve variant van chlamydia, wordt sinds de uitbraak van LGV in 2004 nog steeds regelmatig gevonden: in 2009 werden in totaal 85 gevallen van LGV, een afname van 15 procent ten opzichte van 2008.

Het percentage positieve gonorroetesten in de soa-centra steeg van 2,2 procent in 2008 naar 2,6 procent in 2009 (2.422 positieve testen in 2009). Deze toename was ook zichtbaar binnen het huisartsennetwerk. Gonorroe werd vooral gevonden bij MSM (58 procent). Vooral het aantal positieve orale gonorroetesten onder MSM nam toe (3,3 procent in 2008 en 4,8 procent in 2009).

Het percentage positieve testen van syfilis blijft verder afnemen: 4,3 procent in 2007, 3,9 procent in 2008 en 2,8 procent in 2009. In totaal waren er in 2009 512 positieve syfilis-testen waarbij 89 procent MSM was.

Bij specifieke etnische groepen (onder andere afkomstig uit Suriname, Nederlandse Antillen en Aruba) was het percentage positieve testen voor chlamydia en gonorroe (mannen en vrouwen), en voor syfilis (alleen MSM) hoger dan bij autochtone Nederlanders, wat aangeeft dat preventie gericht op specifieke groepen essentieel is.

Virale soa, inclusief hiv

In de soa-centra werden 387 nieuwe hiv-diagnoses gesteld in 2009. Het percentage positieve hiv-testen daalde voor MSM van 3,0 procent in 2008 naar 2,4 procent in 2009. Bij heteroseksuele mannen en vrouwen bleef het stabiel (respectievelijk 0,1 procent en 0,1 procent).

In 2009 werden 1.252 nieuwe aanmeldingen van hiv-positieve personen gerapporteerd in de nationale hiv-registratie bij de Stichting HIV Monitoring, waarvan er 812 gediagnosticeerd werden in 2009. Eind 2009 waren in totaal 16.555 personen met hiv in Nederland geregistreerd. Het aandeel nieuw gerapporteerde hiv-infecties bij MSM stabiliseerde in

2009 (66 procent). Bij ruim een derde van de nieuw gediagnosticeerde hiv-positieve MSM die de soa-centra bezochten werd een chlamydia en/of gonorroe infectie gevonden. Het aantal diagnoses van genitale wratten bleef stijgen in 2009 in de soa-centra, een toename van 11 procent. Na een stijgende tendens in de voorgaande jaren, daalde het aantal diagnoses van genitale herpes (HSV) in 2009 met 10 procent. Hierbij moet worden opgemerkt dat onderzoek van genitale wratten en HSV alleen op indicatie gebeurt, waardoor het aantal diagnoses niet vergelijkbaar is met die van de besproken bacteriële soa en hiv, waarop routinematig getest wordt. Uit de verplichte aangifte van hepatitis B bleek dat het aantal acute hepatitis B infecties in 2009 met 10 procent daalde ten opzichte van het aantal gerapporteerde gevallen in 2008. Het aantal gerapporteerde acute hepatitis C gevallen bleef stabiel ten opzichte van 2008, maar binnen de groep van MSM was een daling van 29 procent.

Kortom, een sterke soa-surveillance blijft essentieel om zicht te houden op relevante trends. De bestrijding zou verder ondersteund kunnen worden door beter zicht op de effectiviteit van partnerwaarschuwing, zicht op het voorkomen van co-infecties en soa per anatomische locatie, alsmede een verdere ontwikkeling van moleculaire technieken om de toenemende resistentie van gonorroestammen tegen antibiotica te monitoren.

Summary

In 2009, 93,331 new STI consultations were carried out in the national network of STI centres in the Netherlands, an increase of 6 per cent compared with 2008. The STI centres target high-risk groups by patient selection based on a standardised list of criteria. High-risk groups, such as MSM (19 per cent of all attendees in 2009), persons originating from STI/HIV endemic areas (12 per cent of all attendees in 2009) and young people under 25 years of age (40 per cent of all attendees in 2009) are tested free of charge and when asked anonymously. In 2009, 96 per cent of attendees fulfilled one or more of the criteria for high risk groups or wanted to be tested anonymously.

Besides data from the STI centres, data from regular care (general practitioners, HIV treatment centres) and other surveillance sources are also reported.

Bacterial STI

With 9,771 reported cases, chlamydia remained the most commonly diagnosed bacterial STI in the STI centres in 2009. The overall positivity rate was 10.5 per cent compared with 10.8 per cent in 2008. The highest positivity rate was in heterosexual men (10.8 per cent). The majority of chlamydia cases in heterosexuals were diagnosed in persons younger than 25 years of age (52 per cent). LGV, a vicious strain of chlamydia, was found frequently in 2009 since the outbreak of LGV in 2004. In 2009 there were 85 new LGV cases diagnosed, a decrease of 15 per cent compared with 2008.

The positivity rate for gonorrhoea increased in STI centres from 2.2 per cent in 2008 to 2.6 per cent in 2009 (2,422 positive tests in 2009). This increase was also visible in GPs. Gonorrhoea was most prevalent among MSM (58 per cent). Especially the number of positive oral gonorrhoea tests among MSM increased (3.3 per cent in 2008 to 4.8 per cent in 2009).

The positivity rate of syphilis shows a decreasing trend: 4.3 per cent in 2007, 3.9 per cent in 2008 and 2.8 per cent in 2009. In total, 512 positive syphilis tests were reported, including 89 per cent MSM.

Specific ethnic minorities (for instance from Surinam, the Netherlands Antilles and Aruba) had higher positivity rates for chlamydia and gonorrhoea (men and women) and syphilis (only MSM) than autochthonous Dutch, pointing to the need for targeted intervention by risk profile.

Viral STI, including HIV

At the STI centres, a total of 387 HIV infections were diagnosed in 2009. HIV positivity rates in MSM decreased from 3.0 percent in 2008 to 2.4 per cent in 2009 and remained stable in heterosexual men and women (0.1 per cent and 0.1 per cent respectively).

In 2009, 1,252 HIV infected persons were newly registered in the national database of the HIV treatment centres (SHM); 812 of them were diagnosed in 2009. As of December 2009, a total of 16,555 HIV patients in medical care had been recorded in the Netherlands. The proportion of MSM among the newly diagnosed stabilised in 2009 (66 per cent) but data were still incomplete. More than one third of the newly diagnosed HIV positive MSM consulting the STI centres were co-infected with a chlamydia and/or gonorrhoea infection.

The reported number of genital warts continued to increase in the STI centres in 2009 (11 per cent increase in 2009). After an increasing trend in previous years, the reported number of genital herpes (HSV) dropped by 10 per cent. These two STIs were tested by indication only, so the number of diagnoses is not comparable to the bacterial STI and HIV as described above (routinely screened). The notification data on acute hepatitis B showed a decrease of 10 per cent compared with 2008. The total number of reported acute hepatitis C cases remained stable but within the MSM, a decline of 29 per cent was reported.

In conclusion, a strong STI surveillance remains a prerequisite to monitor relevant trends. STI control could be supported by improved insight on the effectiveness of partner notification, insight on the occurrence of co-infections and STI per anatomical location, as well as the development of molecular techniques to monitor the increasing resistance of gonorrhoea to antibiotics.

List of abbreviations

ACS	Amsterdam Cohort Studies
AIDS	Acquired Immune Deficiency Syndrome
ATHENA	AIDS Therapy Evaluation in the Netherlands
Cib	Centrum Infectieziektebestrijding, Centre for Infectious Disease and Control
CSI	Chlamydia Screening Implementation
CSW	Commercial Sex Worker
ECDC	European Centre for Disease Prevention and Control
GP	General Practitioner
GRAS	Gonococcal Resistance to Antimicrobials Surveillance programme
HAART	Highly active anti-retroviral therapy
HBV	Hepatitis B virus
HCV	Hepatitis C virus
HIV	Human Immunodeficiency virus
HPV	Human papilloma virus
HSV	Herpes simplex virus
IDU	Intravenous Drug Users
IGZ	Inspectorate of Health
LGV	Lymphogranuloma venereum
LIS	Laboratory for Infectious Disease and Screening
LINH	Landelijk Informatienetwerk Huisartsen, Information Network of General Practice
MSM	Men who have sex with men
NIVEL	Nederlands Instituut voor onderzoek van de Gezondheidszorg, Netherlands Institute for Health Services Research
RIVM	Rijksinstituut voor Volksgezondheid en Milieu, National Institute for Public Health and the Environment
SHM	Stichting HIV Monitoring
SOAP	Online STI registration system
STI	Sexually Transmitted Infection

Introduction

This report describes current trends in the epidemiology of STIs, including HIV, in the Netherlands. It is prepared by the Centre for Infectious Disease Control (CIb) at the National Institute for Public Health and the Environment (RIVM). The CIb collaborates with various partners in the field of STI to collect data for surveillance and to generate insights into trends and determinants: the STI centres, the Stichting HIV Monitoring (SHM), public health laboratories and other health care providers.

The systematically collected data among high-risk groups seen at the nationwide network of STI centres under the responsibility of the Municipal Health Centres, are the backbone of the Dutch STI surveillance on STI trends and risk factors. As much as possible, other available STI selected data from surveys, national registries, cohort studies and other surveillances are included as well. Together they provide an overview of the current status of STI, including HIV in the Netherlands. Preliminary data have been presented in the *Thermometer* (April 2010).

Outline of the report

In Chapter 1 the methodology of STI surveillance in the Netherlands is described, including all data sources used for this report. In Chapter 2 the characteristics of STI centre attendees, Sense and the General Practitioners are presented for 2009. Chapters 3–5 deal with bacterial STI (chlamydia, gonorrhoea and syphilis) and Chapters 6–10 focus on viral STI, including HIV, genital warts, genital herpes and hepatitis B and C. Conclusions and recommendations are described in Chapter 11.

1 Methodology of STI and HIV surveillance

Tables and figures for this report are based on a variety of data sources to compile an up to date overview of the STI/HIV epidemic in the Netherlands. The foundation of this overview is the systematic surveillance among high risk groups seen in the nationwide system of STI centres. Data from general practitioners, who perform the bulk of STI consultations, are extrapolated from the LINH network. To gain insight in trends among HIV patients in care, data from the anonymous HIV surveillance at STI centres and the HIV treatment centres (Stichting HIV Monitoring) are obtained. Other additional data sources are Sense, the laboratory surveillance, the Chlamydia Screening Implementation (CSI), the Gonococcal Resistance to Antimicrobials Surveillance programme (GRAS), the antenatal screening and the data on hepatitis B and C notifications.

1.1 National surveillance at STI centres

Since 1995, STIs are registered in an STI database at the RIVM in the Netherlands. In 2003, an STI sentinel surveillance system was put in place, which reached national coverage in 2004 with the inclusion of all major STI centres. Since January 2006, reporting to the national STI surveillance system is organised into eight regions. In each region, there is one STI centre that is responsible for regional coordination of STI control (Figure 1.1). In total, 29 specific STI centres, mostly within the municipal health services and some of them with different test locations, provide low threshold STI/HIV testing and care, free of charge, targeted at high-risk groups and people who want to be tested anonymously. Currently, persons matching one of the following criteria: (1) reporting

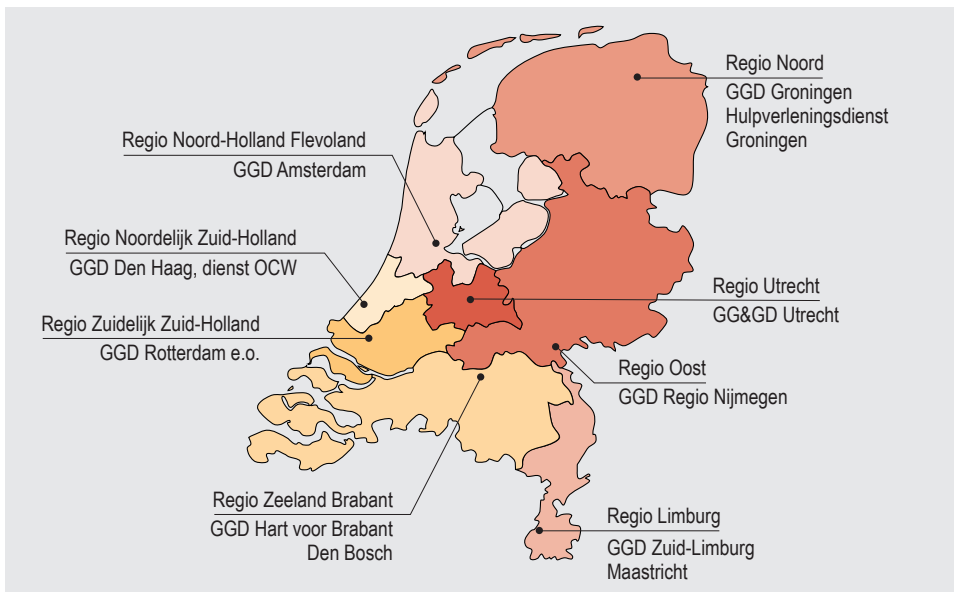


Figure 1.1: Eight regions with coordinating STI centre indicated

STI-related symptoms, (2) notified or referred for STI testing, (3) age below 25 years, (4) MSM, (5) involved in commercial sex, (6) originating from an HIV/STI endemic area or (7) three or more sexual partners in the previous six months, are considered to be at increased risk for STI acquisition. Furthermore, persons who indicate they want to be tested anonymously can also make use of the STI centres to guarantee 'low threshold' STI care. All attendees are mandatorily tested for chlamydia, gonorrhoea and syphilis. Other STIs tested on indication are HIV, hepatitis B and C, genital herpes, trichomonas and LGV. All consultations and corresponding diagnoses are reported online to the CIB for surveillance purposes, facilitated by a web-based application (SOAP). The unit of analysis is 'new STI consultation' and anonymised reports contain epidemiological, behavioural, clinical and microbiological data on a wide range of STI.

In this report, the results of national surveillance of STI centres are presented with respect to the number and nature of new consultations and diagnoses. Trends in positivity rates by risk profile (based on demographic and behavioural indicators) in time are based on data from the STI centres in the national surveillance since 2004. Where data were not complete for a specific period or STI centre, this is indicated. We focus on the major bacterial and viral STI, including HIV infection.

1.2 Sense

To strengthen primary prevention and promote sexual health among young adults (<25 years), a nationwide network of consultation centres (Sense) was established, under the coordination of the same Municipal Health Centres that coordinate the STI centres. To these Sense locations young adults can anonymously address themselves for information and personal consultations on a broad range of subjects relating to sexual health; for example: (problems with) sexual intercourse, unwanted pregnancy, birth control, STI, homosexuality, sexual violence, lover-boys etc. For this purpose, two consultations per person and per personal question are offered free of charge. Sense consultation locations are available through a nationwide network.

In addition to these personal consultations, the Sense web site (www.sense.info) offers information covering subjects about STI, pregnancy, birth control and sexuality. Via this web site, clients can anonymously address themselves to the Sense info line (phone, email or chat) for more information or personal questions.

Preliminary data on the numbers of visitors for both Sense consultations as well as the Sense.info website are presented.

1.3 STI surveillance in general practice

Data on STI diagnoses in general practice were obtained from the electronic medical records database of the Netherlands 'Information Network of General Practice' (LINH) from 2002 to 2008 (2009 data not yet available at time of reporting).¹ The GP surveillance network LINH consisted of 82 practices in 2008 (113 GPs), geographically and socially reflecting the Dutch population with 315,545 patients registered, equal to 1.9% of the population in the Netherlands. The pool of practices in the network differs from year to

year as some practices leave and others join, varying between 61 to 83 practices from 2002–2008. Complaints and illnesses were recorded using International Classification of Primary Care (ICPC-1). Trends in reporting rates of STI episodes were calculated using multivariate multilevel analyses (three-level: taking into account patient, practice and year), adjusting for the patients' length of recording in the specific year.² Annual estimates of the total number of episodes seen at GPs in the Netherlands were made by extrapolation of the reporting rates in these practices to the total number of Dutch residents, as obtained from Statistics Netherlands (CBS).

Patients' characteristics include age, sex and urban/rural residence. For chlamydia, which does not have a main ICPC code, we counted ICPC main codes with appropriate prescription and ICPC specific subcodes (chlamydia) for cervicitis, vaginitis, PID in women and orchitis/epididymitis and other genital diseases in men. For HIV and syphilis, the number of cases reported was too small for reliable trend estimates.

1.4 Laboratory surveillance

National laboratory surveillance data are not available for STI, except for data from the weekly virological reports, which include the total number of Chlamydia trachomatis positive tests in their reporting. Data were analysed from 17 laboratories (consistently reporting since 2000, covering an estimated 40 per cent of the main laboratories in the Netherlands).³ There is overlap in the laboratories reporting in this system and the laboratories connected to the STI centres.

1.5 Chlamydia screening

The Chlamydia Screening Implementation (CSI) is the first large-scale intervention programme, piloting a sustainable, selective, systematic and Internet-based Chlamydia Screening during the period 2008–2010. A total of 315,000 16 to 29-year-old residents of Amsterdam, Rotterdam and South Limburg are being invited to annual screening rounds. In the high-prevalence urban areas, all sexually active people are encouraged to participate, while in the lower-prevalence area of South Limburg, only those who match a certain risk-profile are invited. The Public Health Services (PHSs) have implemented the screening and STI AIDS Netherlands is coordinating the programme. The Centre for Infectious Disease Control, RIVM, in collaboration with the PHSs and STI AIDS Netherlands, is conducting the evaluation of the programme. The results will be crucial

1 Verheij RA, van Dijk CE, Abrahamse H, Davids R, van den Hoogen H, Braspenning J, van Althuis T. Landelijk Informatienetwerk Huisartsenzorg. Feiten en cijfers over huisartsenzorg in Nederland. Utrecht/Nijmegen: NIVEL/WOK, <<http://www.LINH.nl>>, accessed 01-04-2009.

2 van den Broek IVF, Verheij RA, van Dijk CE, Koedijk FDH, van der Sande MAB, van Bergen JEAM. Trends in sexually transmitted infections in the Netherlands, combining surveillance data from general practices and sexually transmitted infection centers. BMC Family Practice, in press.

3 van de brandhof WE, Kroes ACM, Bosman A, Peeters MF, Heijnen MLA. Rapportage van virologische diagnostiek in Nederland: representativiteit van de gegevens uit de virologische weekstaten. Infectieziekten Bulletin 2002;13(4):110-3.

for deciding whether and how a national roll-out of Chlamydia trachomatis screening in the Netherlands will take place in the future.

1.6 Antimicrobial resistance of gonococci

In 1999, the surveillance of antibiotic resistance of gonococci at national level was discontinued and since then, insight in gonococcal susceptibility patterns has been limited. Concern for increasing resistance to quinolones at (inter)national level led to a RIVM laboratory survey of the resistance of gonococci in 2002. The results demonstrated the need for a nationwide systematic surveillance of gonococcal antimicrobial resistance. Therefore, in 2006, the Gonococcal Resistance to Antimicrobials Surveillance programme (GRAS) was implemented in the Netherlands. This surveillance consists in systematically collected data on gonorrhoea and resistance patterns linked with epidemiological data. Eighty percent of the STI centres participate.

1.7 Congenital syphilis

For many years, RIVM has offered IgM diagnostics for neonates and young infants (<1 year) who are suspected of being infected with congenital syphilis. In this report, results from 1997–2009 are presented.

1.8 Antenatal screening

Around 185,000 pregnant women are screened annually in the Netherlands for syphilis (since the 1950s), HBV (1989) and HIV (2004). The blood sample is collected during the first midwife appointment (< 13th week of the pregnancy) according to the opting-out principle, whereby all pregnant women undergo the test after having been provided with information, unless they explicitly state they do not wish to participate. Virtually all pregnant women in the Netherlands participate in this infectious diseases screening programme.⁴ The screening programme is coordinated by the Centre for National Screening Programmes (RIVM).

1.9 Anonymous HIV surveillance at STI centres

HIV surveillance among STI centre attendees has been conducted since 1991 in Amsterdam and since 1994 in Rotterdam. In Amsterdam, two cross-sectional studies including 1000 visitors each are conducted every year. In Rotterdam, STI centre attendees are included year round.

⁴ Procesmonitoring prenatale screening infectieziekten en erythrocytenimmunisatie 2005–2007, TNO, Leiden, 2009.

1.10 National registration of patients registered at HIV treatment centres

From January 2002, an anonymous HIV/AIDS reporting system for patients entering care was implemented in the Netherlands. Longitudinal data of all newly registered HIV infected individuals are collected by the SHM (www.hiv-monitoring.nl). The goal of SHM is to monitor HIV infected individuals registered in the 25 recognised HIV treatment centres (including four children's centres) in the Netherlands to study changes in the epidemic and the effects of treatment.

All HIV infected individuals registered in this cohort are followed prospectively from the time of reporting for care. HIV infected individuals in care, who were diagnosed prior to the start of SHM, were as far as possible included in the cohort retrospectively. SHM largely follows the organisational structure that had been established for monitoring HIV in the ATHENA project, a clinical study following HIV infected individuals who are treated with highly active anti-retroviral therapy (HAART). The HIV cases diagnosed before 1996 only include persons who survived up to the start of the ATHENA project in 1996. The epidemiological data on newly reported HIV infections, as well as trends in new AIDS diagnoses after 2000, are reported in collaboration with the CIB at the RIVM. This report presents HIV/AIDS cases up to 2009, however for 2009 data is incomplete due to reporting delay.

Between 1987 and 2002, AIDS cases were reported on a voluntary basis to the Inspectorate of Health (national AIDS registry, IGZ). With the start of the HIV/AIDS monitoring system in 2002 by SHM, the national AIDS registry was ended. In this report, AIDS cases from 1999 or earlier are obtained from the AIDS registry. From 2000, AIDS cases from the SHM monitoring system were used. Data on deaths among HIV patients (including AIDS patients) were obtained through the SHM (≥ 2002 and previously from National Statistics Netherlands (www.cbs.nl) <2002).

1.11 HIV incidence data

HIV incidence data are available in the Amsterdam Cohort Studies (ACS) on HIV/AIDS, which started in 1984 among MSM and in 1985 among IDU. These cohorts provide insight into specific populations and can be supportive for prevention activities to respond effectively to the ongoing HIV epidemic. From 1995 and 1998, special recruitment started among young (<30 years) MSM and IDU, respectively. Since April 2006 enrolment is open again for MSM of all ages with at least one sexual partner in the preceding six months. The ACS, a collaboration between the Amsterdam Health Service, the Academic Medical Centre of the University of Amsterdam, the Sanquin Blood Supply Foundation and the University Medical Centre Utrecht, are part of the SHM and financially supported by the RIVM [www.amsterdamcohortstudies.org].

1.12 Notification of hepatitis B and C

The obligatory notification includes epidemiological data on newly diagnosed acute hepatitis B virus (HBV) infections (since 1976), chronic HBV infections and acute hepatitis C virus (HCV) infections (both since April 1999). Since 2002, all public health services notify HBV and HCV infections by using the web-based application OSIRIS.

2 STI consultations and Sense

2.1 Key points

- In 2009, 93,331 new consultations were registered in the national surveillance in STI centres, an increase of 6% compared with 2008. The increase was highest in transgenders (38%), followed by MSM (19%). The percentage of positives remained stable, at around 13%.
- Characteristics of attendees were as follows: young age (40% under 25 years old), Dutch origin (84%), MSM (17%) and commercial sex workers (5%), 11% had a history of STI and 43% was not previously tested for HIV.
- Of the attendees, 89% had both an STI examination and an HIV test, 11% only had an STI examination (tested for chlamydia, gonorrhoea or syphilis) and 0.3% only had an HIV test. Of the 11% not tested for HIV, 26% were known HIV positives.
- Thirty-nine per cent reported 3 or more sex partners in past six months: for MSM this was 67%.
- Ninety-six per cent of all STI centre attendees fulfilled one or more of the criteria set as indicators of high risk or were tested for reasons of anonymity.
- In GP registrations, the estimated number of reported episodes of fear of STIs and diagnoses of STIs, a proxy for STI consultation, was estimated at 224.000 (95% CI 169.000–273.000) in 2008 (46.5% men and 53.5% women), an increase of 57% compared with 2007 (Figure 2.4).
- In total, 508,635 persons visited the Sense website in 2009. The Sense info line was contacted 3,507 times and there were 9,859 Sense consultations. Respectively, 43% and 24% had an STI question.

2.2 Consultations and characteristics of STI centre attendees

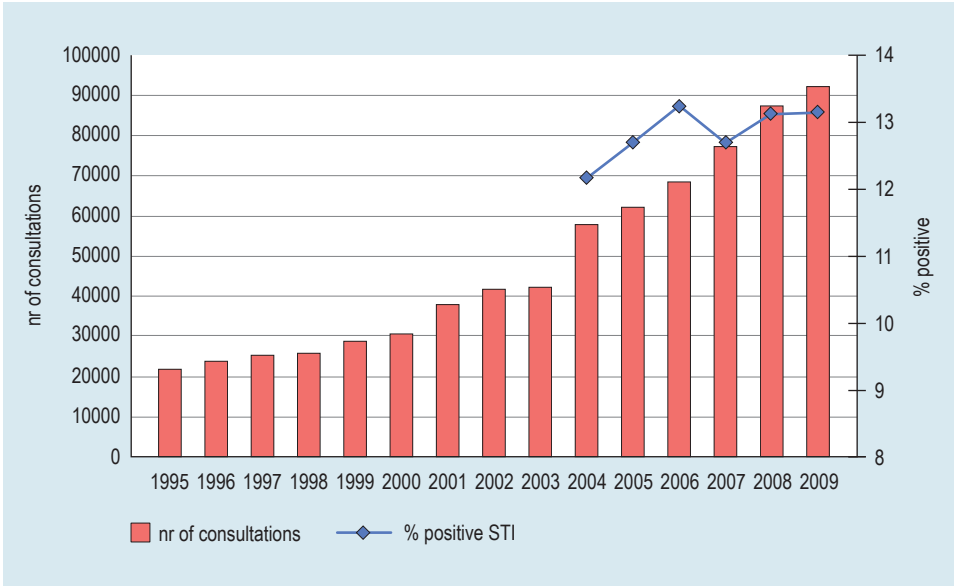


Figure 2.1: Number of consultations and percentage of positive STI (chlamydia, gonorrhoea, infectious syphilis, HIV, infectious hepatitis B) in the national STI surveillance in the Netherlands, 1995–2009

Footnote: 1995–2002: STI registration; 2000: STI centre Erasmus Medical Centre Rotterdam was included; 2003: Implementation of STI sentinel surveillance network; 2004–2009: National STI surveillance network.

Table 2.1: Number of consultations by sexual risk group, 2007–2009

Gender and sexual preference	2007	2008	2009
	n (%)	n (%)	n (%)
Heterosexual men	28689 (36.8)	31770 (36.0)	32584 (34.9)
MSM	11048 (14.2)	13764 (15.6)	16332 (17.5)
Women	38209 (48.9)	42796 (48.5)	44291 (47.5)
Transgender*	29 (0.0)	34 (0.0)	47 (0.1)
Sexual preference unknown*	87 (0.1)	71 (0.1)	77 (0.1)
Total	78062	88435	93331

* Categories 'transgender' and 'sexual preference unknown' are disregarded in the rest of the tables.

Table 2.2: Number of consultations by age, gender and sexual preference, 2009

Age (years)	Heterosexual men	MSM	Women	Total
	n (%)	n (%)	n (%)	n (%)
≤14	7 (0.0)	0 (0.0)	83 (0.2)	90 (0.1)
15-19	1490 (4.6)	444 (2.7)	5415 (12.2)	7349 (7.9)
20-24	9513 (29.2)	1753 (10.7)	18239 (41.2)	29505 (31.7)
25-29	7983 (24.5)	2154 (13.2)	9398 (21.2)	19535 (21.0)
30-34	4309 (13.2)	2395 (14.7)	4012 (9.1)	10716 (11.5)
35-39	2937 (9.0)	2396 (14.7)	2481 (5.6)	7814 (8.4)
40-44	2522 (7.7)	2544 (15.6)	2035 (4.6)	7101 (7.6)
45-49	1682 (5.2)	1983 (12.1)	1420 (3.2)	5085 (5.5)
50-54	1034 (3.2)	1200 (7.3)	770 (1.7)	3004 (3.2)
≥ 55	1100 (3.4)	1458 (8.9)	430 (1.0)	2988 (3.2)
Unknown	7 (0.0)	5 (0.0)	8 (0.0)	20 (0.0)
Total	32584	16332	44291	93207

Table 2.3: Number of consultations by ethnicity, gender and sexual preference, 2009

Ethnicity	Heterosexual men	MSM	Women	Total
	n (%)	n (%)	n (%)	n (%)
The Netherlands	27046 (83.0)	13508 (82.7)	37425 (84.5)	77979 (83.7)
Turkey	390 (1.2)	89 (0.5)	94 (0.2)	573 (0.6)
North Africa/Morocco	523 (1.6)	90 (0.6)	234 (0.5)	847 (0.9)
Surinam	1349 (4.1)	221 (1.4)	1237 (2.8)	2807 (3.0)
Netherlands Antilles/Aruba	545 (1.7)	185 (1.1)	458 (1.0)	1188 (1.3)
Sub-Saharan Africa	649 (2.0)	76 (0.5)	490 (1.1)	1215 (1.3)
Eastern Europe	232 (0.7)	274 (1.7)	1295 (2.9)	1801 (1.9)
Latin America	231 (0.7)	377 (2.3)	674 (1.5)	1282 (1.4)
Asia	410 (1.3)	336 (2.1)	512 (1.2)	1258 (1.3)
Europe other	517 (1.6)	273 (1.7)	1213 (2.7)	2003 (2.1)
Else	643 (2.0)	889 (5.4)	609 (1.4)	2141 (2.3)
Unknown	49 (0.2)	14 (0.1)	50 (0.1)	113 (0.1)
Total	32584	16332	44291	93207

Table 2.4: Number of consultations by (sexual) behavioural characteristics, gender and sexual preference, 2009

	Heterosexual men	MSM	Women	Total
	n (%)	n (%)	n (%)	n (%)
Number of partners in past 6 months				
0 partners	501 (1.5)	159 (1.0)	768 (1.7)	1428 (1.5)
1 partner	8887 (27.3)	1989 (12.2)	15982 (36.1)	26858 (28.8)
2 partners	8516 (26.1)	2004 (12.3)	11439 (25.8)	21959 (23.6)
3 or more partners	13333 (40.9)	10947 (67.0)	11953 (27.0)	36233 (38.9)
Unknown	1347 (4.1)	1233 (7.5)	4149 (9.4)	6729 (7.2)
Condom use at last sexual contact*				
No	12859 (68.4)	3482 (53.7)	17951 (70.6)	34292 (67.7)
Yes	5578 (29.7)	2608 (40.2)	6644 (26.1)	14830 (29.3)
Unknown	355 (1.9)	396 (6.1)	816 (3.2)	1567 (3.1)
Previous GO/CT/syphilis in anamnesis				
No	28369 (87.1)	12162 (74.5)	37673 (85.1)	78204 (83.9)
Yes	2406 (7.4)	3559 (21.8)	4287 (9.7)	10252 (11.0)
Do not know	1303 (4.0)	302 (1.8)	1543 (3.5)	3148 (3.4)
Unknown	506 (1.6)	309 (1.9)	788 (1.8)	1603 (1.7)
Previous HIV test				
No	16761 (51.4)	2507 (15.4)	20462 (46.2)	39730 (42.6)
Yes, positive	35 (0.1)	2528 (15.5)	37 (0.1)	2600 (2.8)
Yes, negative	15278 (46.9)	10944 (67.0)	22829 (51.5)	49051 (52.6)
Yes, result unknown	90 (0.3)	68 (0.4)	142 (0.3)	300 (0.3)
Unknown	420 (1.3)	285 (1.7)	821 (1.9)	1526 (1.6)
CSW, women				
No			39902 (90.1)	
Yes, in past 6 months			4234 (9.6)	
Unknown			155 (0.3)	
Client of CSW, men				
No	29078 (89.2)	15818 (96.9)		44896 (91.8)
Yes, in past 6 months	3328 (10.2)	296 (1.8)		3624 (7.4)
Unknown	178 (0.5)	218 (1.3)		396 (0.8)
Swinger*				
No	17878 (91.8)	5762 (86.4)	24116 (91.1)	47756 (90.8)
Yes	1384 (7.1)	679 (10.2)	2014 (7.6)	4077 (7.7)
Unknown	203 (1.0)	227 (3.4)	354 (1.3)	784 (1.5)
Injecting drug use				
No	32087 (98.5)	15913 (97.4)	43282 (97.7)	91282 (97.9)
Yes, ever	88 (0.3)	50 (0.3)	97 (0.2)	235 (0.3)
Yes, in past 6 months	39 (0.1)	23 (0.1)	59 (0.1)	121 (0.1)
Unknown	370 (1.1)	346 (2.1)	853 (1.9)	1569 (1.7)

* Voluntary question, answered by 54% (N=50,689) for condom use and by 56% (N=52,617) for swinger.

Table 2.5: Reported indication by gender and sexual preference, 2009

Indication	Heterosexual men	MSM	Women	Total
	n (%)	n (%)	n (%)	n (%)
STI/HIV endemic area	4329 (13.3)	1648 (10.1)	4994 (11.3)	10971 (11.8)
Symptoms	9269 (28.4)	4395 (26.9)	11486 (25.9)	25150 (27.0)
Partner in risk group	6246 (19.2)	14200 (86.9)	10187 (23.0)	30633 (32.9)
Referred	1313 (4.0)	1164 (7.1)	1421 (3.2)	3898 (4.2)
Notified	3787 (11.6)	2141 (13.1)	3636 (8.2)	9564 (10.3)
Anonymous test	12863 (39.5)	4975 (30.5)	19347 (43.7)	37185 (39.9)
No indication	1930 (5.9)	0 (0.0)	1884 (4.3)	3814 (4.1)

* Percentages do not add up to 100% since one client can have more than one indication.

** Other indications not shown in the table are: aged 24 years or younger, 3 or more partners in previous 6 months, MSM, CSW (women), client of CSW (men).

Table 2.6: Number of diagnoses by gender and sexual preference, 2009

Diagnosis	Heterosexual men	MSM	Women	Total
	n (%)	n (%)	n (%)	n (%)
Gonorrhoea	482 (6.4)	1402 (20.9)	538 (5.5)	2422 (10.1)
Chlamydia	3491 (46.7)	1609 (24.0)	4671 (47.8)	9771 (40.8)
Syphilis				
primary	16 (0.2)	149 (2.2)	4 (0.0)	169 (0.7)
secondary	9 (0.1)	127 (1.9)	4 (0.0)	140 (0.6)
latens recens	14 (0.2)	179 (2.7)	10 (0.1)	203 (0.8)
latens tarda	44 (0.6)	74 (1.1)	33 (0.3)	151 (0.6)
not specified	3 (0.0)	13 (0.2)	7 (0.1)	23 (0.1)
HIV	43 (0.6)	304 (4.5)	40 (0.4)	387 (1.6)
Genital warts	1129 (15.1)	588 (8.8)	1012 (10.4)	2729 (11.4)
Genital herpes				
primary: HSV1	69 (0.9)	56 (0.8)	144 (1.5)	269 (1.1)
primary: HSV2	137 (1.8)	65 (1.0)	121 (1.2)	323 (1.3)
primary: HSV unknown	16 (0.2)	6 (0.1)	22 (0.2)	44 (0.2)
recurrent	7 (0.1)	5 (0.1)	5 (0.1)	17 (0.1)
Hepatitis B				
infectious	89 (1.2)	57 (0.8)	64 (0.7)	210 (0.9)
recovered	641 (8.6)	759 (11.3)	602 (6.2)	2002 (8.4)
Hepatitis C	6 (0.1)	5 (0.1)	7 (0.1)	18 (0.1)
Non specified urethritis	942 (12.6)	783 (11.7)	15 (0.2)	1740 (7.3)
Candidiasis	221 (3.0)	37 (0.6)	1091 (11.2)	1349 (5.6)
Bacterial vaginosis	6 (0.1)	1 (0.0)	1167 (11.9)	1174 (4.9)
Trichomoniasis	47 (0.6)	7 (0.1)	169 (1.7)	223 (0.9)
Scabies	14 (0.2)	24 (0.4)	2 (0.0)	40 (0.2)
Pubic Lice	0 (0.0)	4 (0.1)	0 (0.0)	4 (0.0)
Ulcus e.c.i.	57 (0.8)	73 (1.1)	46 (0.5)	176 (0.7)
Lymphogranuloma venereum	0 (0.0)	84 (1.3)	0 (0.0)	84 (0.4)
Proctitis	0 (0.0)	297 (4.4)	2 (0.0)	299 (1.2)
Total	7483	6708	9776	23967

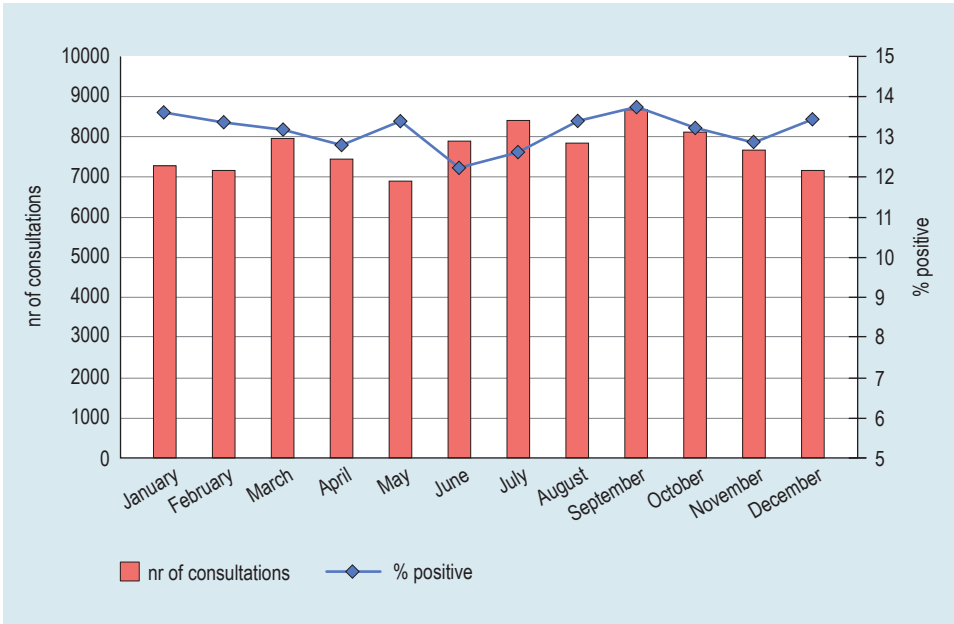


Figure 2.2: Number of consultations and percentage of positive STI in the national STI surveillance in the Netherlands per month in 2009

Footnote: STI include: chlamydia, gonorrhoea, infectious syphilis, HIV and infectious hepatitis B.

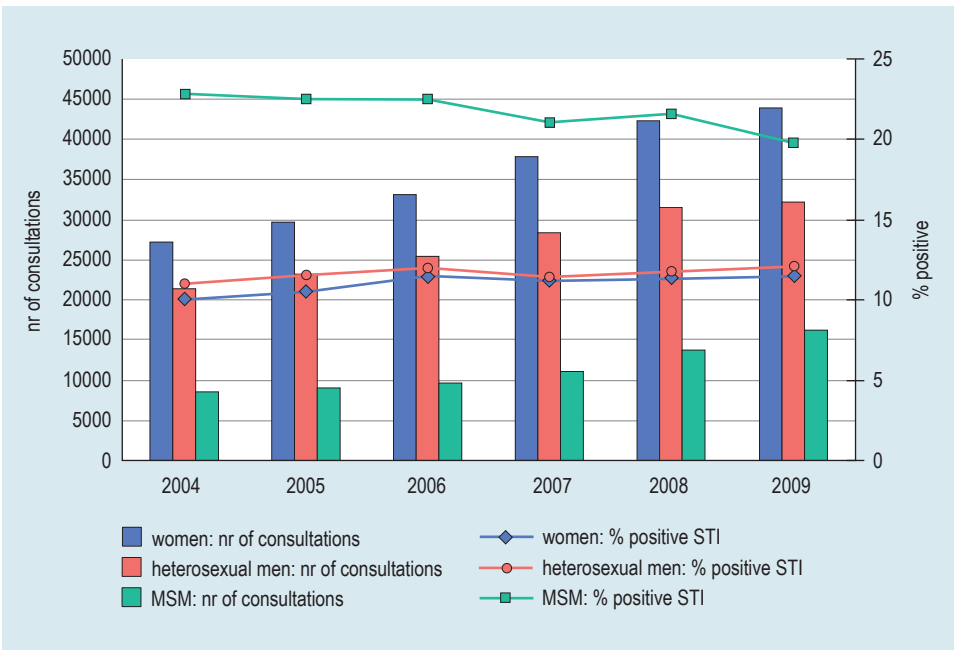


Figure 2.3: Number of consultations and percentage of positive STI in the national STI surveillance in the Netherlands per gender and sexual preference, 2004–2009

2.3 General Practitioner network

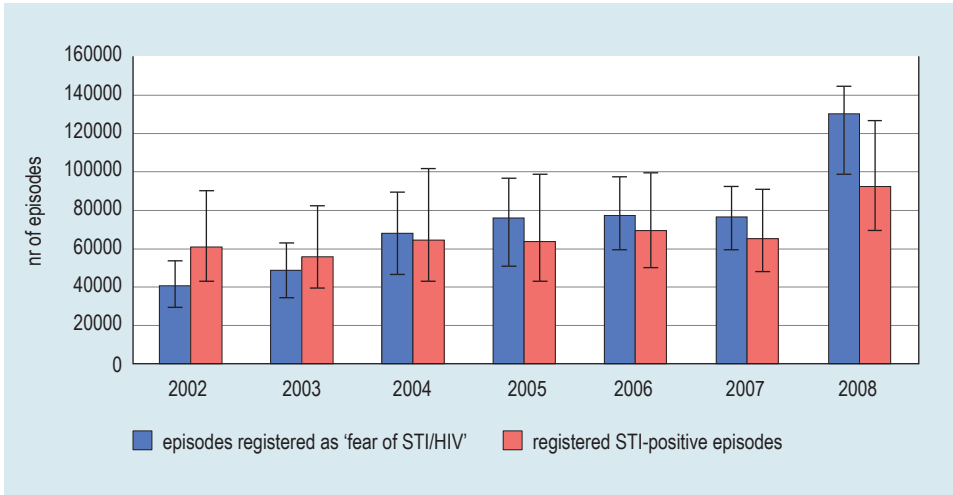


Figure 2.4: Estimated number (and 95% CI) of registered episodes of fear of STI/HIV and positive diagnoses of STIs at GPs, based on extrapolation from 80 practices in the surveillance network of GPs in the Netherlands, 2002–2008

Footnote: diagnoses included are chlamydia, gonorrhoea, syphilis, hiv, trichomonas, genital herpes, genital warts, non-specific urethritis. (Source: LINH)

Table 2.7: Reporting rate (number of STI related episodes per 100,000 population) of diagnoses and fear of STI/HIV at GPs in the Netherlands by gender, 2002–2008

Year	Men		Women		Total	
	n/100,000	95% CI	n/100,000	95% CI	n/100,000	95% CI
2002	592	(424–843)	682	(471–960)	637	(449–899)
2003	572	(408–820)	725	(513–997)	648	(461–907)
2004	722	(506–1064)	921	(595–1309)	821	(552–1185)
2005	815	(577–1183)	908	(581–1235)	861	(580–1207)
2006	828	(627–1110)	982	(715–1318)	905	(673–1212)
2007	817	(633–1067)	934	(688–1194)	876	(661–1129)
2008	1286	(1032–1615)	1447	(1029–1721)	1366	(1032–1666)

CI = confidence interval.

Footnote: diagnoses included are chlamydia, gonorrhoea, syphilis, hiv, trichomonas, genital herpes, genital warts, non-specific urethritis. (Source: LINH)

2.4 Sense

Table 2.8: Number and type of personal contact Sense, 2009

	n (%)
Sense info line	3507
Telephone	628 (17.9)
Email	1895 (54.0)
Chat	984 (28.1)
Sense consultation	9859

Table 2.9: Subjects who contact Sense info line and consultations, 2009

Subjects	Info line (N=3507) n (%)*	Consultation (N=9859) n (%)
STI	1514 (43.2)	2329 (23.6)
Birth control	298 (8.5)	3729 (37.8)
(Unwanted) pregnancy	191 (5.4)	1763 (17.9)
Unwanted sexual behaviour/sexual violence	71 (2.0)	321 (3.3)
Sexuality	1700 (48.5)	1202 (12.2)
Sexual (dys)function	573 (16.3)	NA
Sexual relationships	456 (13.0)	NA
Physical, girl	340 (9.7)	NA
Physical, boy	331 (9.4)	NA
Else	NA	515 (5.2)

* Percentages do not add up to 100% since one client can have more than one question.

NA = not available.

Table 2.10a: Number of contacts Sense info line by gender, 2009

Gender	(N=3507) n (%)
Male	1788 (51.0)
Female	1613 (46.0)
Unknown	106 (3.0)

Table 2.10b: Number of contacts Sense info line by age, 2009

Age (years)	(N=3507) n (%)
≤ 11	140 (4.0)
12–16	876 (25.0)
17–25	1227 (35.0)
≥ 26	420 (12.0)
Unknown	844 (24.1)

Table 2.11: Number of Sense consultations by age and gender, 2009

Age (years)	Men (%)	Women (%)	Total (%)
≤ 14	46 (3.3)	210 (2.5)	256 (2.6)
15–19	286 (20.6)	3040 (35.9)	3326 (33.7)
20–24	672 (48.5)	4252 (50.2)	4924 (49.9)
≥ 25	382 (27.6)	971 (11.5)	1353 (13.7)
Total	1386	8473	9859

Table 2.12: Number of Sense consultations by country of birth, 2009

Country of birth	(N=9859) n (%)
The Netherlands	8478 (86.0)
Turkey	56 (0.6)
Morocco	65 (0.7)
Surinam	188 (1.9)
Netherlands Antilles	166 (1.7)
Else	906 (9.2)

Bacterial STI

3 Chlamydia, including lymphogranuloma venereum

3.1 Key points

- Chlamydia remained the most commonly diagnosed bacterial STI: 9,771 cases were diagnosed in the STI centres in 2009 (36% in heterosexual men, 16% in MSM, 48% in women) compared with 9,403 cases in 2008.
- Overall, the positivity rate for chlamydia was 10.5% in 2009 compared with 10.8% in 2008. (Figure 3.2).
- Highest positivity rates were observed in young heterosexuals (15–19 years), in adult MSM (35–39 years), in persons from Surinam or the Netherlands Antilles and those who reported a previous STI.
- Twenty-one percent of the MSM with chlamydia had a co-infection with gonorrhoea; in heterosexuals this was 4.5%.
- For GPs, the number of reported chlamydia infections was estimated at 31,544 (95% CI 24,211–41,754) in 2008 (58% men and 42% women), an increase of 45% compared with 2007. Especially the number of chlamydia infections among men increased (by 53% compared with 2007) (Figure 3.3).
- Eighty-five new LGV cases were diagnosed in the STI centres: 84 MSM and 1 man of unknown sexual preference, 70% was known to be HIV positive.

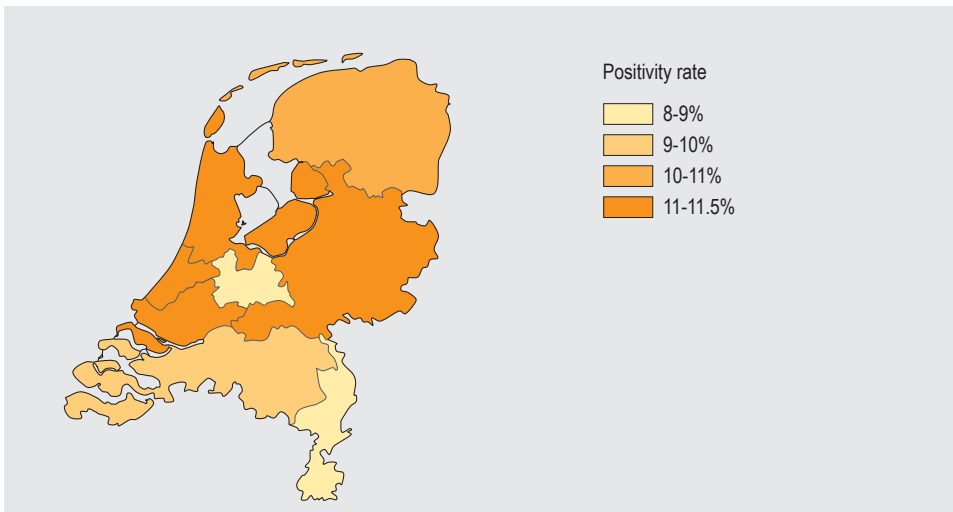


Figure 3.1: Positivity rates for chlamydia by STI centre, the Netherlands, 2009

3.2 Characteristics, risk groups and trends

Table 3.1: Number and percentage of positive tests for chlamydia by age, gender and sexual preference, 2009

Age (years)	Heterosexual men		MSM		Women	
	pos. tests	% pos.	pos. tests	% pos.	pos. tests	% pos.
0–14	1	14.3	0	0	7	8.4
15–19	227	15.3	41	9.3	933	17.3
20–24	1374	14.5	169	9.7	2335	12.8
25–29	962	12.1	215	10	806	8.6
30–34	410	9.6	224	9.4	222	5.6
35–39	221	7.6	289	12.1	153	6.2
40–44	138	5.5	257	10.2	85	4.2
45–49	86	5.2	198	10	62	4.4
50–54	35	3.4	105	8.8	42	5.5
≥ 55	36	3.3	111	7.7	26	6.1
Unknown	1	20	0	0	0	0
Total	3491	10.8	1609	9.9	4671	10.6

Table 3.2: Number and percentage of positive tests for chlamydia by ethnicity, gender and sexual preference, 2009

Ethnicity	Heterosexual men		MSM		Women	
	pos. tests	% pos.	pos. tests	% pos.	pos. tests	% pos.
The Netherlands	2746	10.2	1257	9.4	3935	10.6
Turkey	42	10.9	12	13.6	11	11.7
North Africa/Morocco	79	15.2	13	14.4	28	12.2
Surinam	223	16.5	25	11.3	184	14.9
Netherlands Antilles/Aruba	117	21.6	30	16.6	72	15.8
Sub-Saharan Africa	71	11	13	17.1	35	7.2
Eastern Europe	35	15.4	29	10.6	137	10.6
Latin America	40	17.3	50	13.3	53	7.9
Asia	36	8.9	46	13.7	66	13
Europe other	31	6	25	9.2	88	7.3
Else	66	10.3	109	12.3	57	9.4
Unknown	5	10.2	0	0	5	10.2
Total	3491	10.8	1609	9.9	4671	10.6

Table 3.3: Number and percentage of positive tests for chlamydia by sexual behavioural characteristics, gender and sexual preference, 2009

	Heterosexual men		MSM		Women	
	pos. tests	% pos.	pos. tests	% pos.	pos. tests	% pos.
Number of partners in past 6 months						
0 partners	12	2.5	5	3.3	42	5.5
1 partner	868	9.9	119	6.1	1663	3.8
2 partners	898	10.6	185	9.3	1300	11.4
3 or more partners	1598	12.0	1194	10.9	1352	11.3
Unknown	115	8.7	106	8.8	314	7.7
Condom use at last sexual contact*						
No	1494	11.7	347	10.1	2105	11.8
Yes	383	6.9	220	8.5	600	9.1
Unknown	30	8.7	28	7.2	71	8.8
Previous GO/ CT/syphilis in anamnesis						
No	2890	10.3	1042	8.6	3777	10.1
Yes	405	16.9	528	14.9	632	14.8
Don't know	143	11.0	25	8.3	189	12.3
Unknown	53	10.5	14	4.9	73	9.5
Previous HIV test						
No	1929	11.6	230	9.2	2489	12.2
Yes, positive	3	8.6	460	18.3	6	16.2
Yes, negative	1503	9.9	898	8.3	2070	9.1
Yes, result unknown	10	11.4	6	9.0	12	8.5
Unknown	46	11.0	15	5.5	94	11.6
CSW, women						
No					4347	10.9
Yes, in past 6 months					313	7.4
Unknown					11	7.4
Client of CSW, men						
No	3273	11.3	1576	10.0		
Yes, in past 6 months	202	6.2	18	6.1		
Unknown	16	9.1	15	7.0		
Swinger*						
No	1867	10.6	520	9.2	2678	11.2
Yes	47	3.4	40	5.9	109	5.4
Unknown	23	11.3	16	7.2	34	9.9

* Voluntary question, condom use answered by 54% (n=50,307) and swinger by 56% (n=52,186) of persons tested for chlamydia.

Table 3.4: Concurrent STI by gender and sexual preference among persons diagnosed with chlamydia, 2009

Concurrent STI	Heterosexual men (N=3491) n (%)	MSM (N=1609) n (%)	Women (N=4671) n (%)
Gonorrhoea	161 (4.6)	334 (20.8)	196 (4.2)
Infectious syphilis	4 (0.1)	72 (4.5)	1 (0.0)
HIV newly diagnosed	5 (0.1)	55 (3.4)	2 (0.0)
Genital herpes	23 (0.7)	12 (0.7)	23 (0.5)
Genital warts	90 (2.6)	74 (4.6)	117 (2.5)
Hepatitis B, infectious	10 (0.3)	11 (0.7)	5 (0.1)

Table 3.5: Location of chlamydia infection by gender and sexual preference, 2009

Location	Heterosexual men (N=3491) n (%)	MSM (N=1609) n (%)	Women (N=4671) n (%)
Urogenital only	3464 (9.2)	481 (29.9)	4052 (86.7)
Anorectal only	6 (0.2)	884 (54.9)	90 (1.9)
Oral only	1 (0.0)	31 (1.9)	41 (0.9)
Urogenital and anorectal	1 (0.0)	157 (9.8)	268 (5.7)
Urogenital and oral	3 (0.1)	12 (0.7)	107 (2.3)
Anorectal and oral	1 (0.0)	21 (1.3)	2 (0.0)
Urogenital and anorectal and oral	0 (0.0)	6 (0.4)	18 (0.4)
Pooled samples*	15 (0.4)	17 (1.1)	93 (2.0)

* Pooled samples are samples from more than one anatomical site tested in one molecular test, so that location of the infection is unknown.

Table 3.6: Number and percentage of positive tests for chlamydia by location, gender and sexual preference, 2006–2009

	2006		2007		2008		2009	
	pos. tests*	% pos.	pos. tests*	% pos.	pos. tests*	% pos.	pos. tests*	% pos.
Heterosexual men								
Urogenital	2605	10.5	2807	9.9	3343	10.6	3480	10.8
Anorectal	0	0.0	0	0.0	2	0.8	7	1.6
Oral	14	1.6	10	1.3	6	1.1	4	0.5
MSM								
Urogenital	442	4.8	454	4.2	651	4.8	661	4.1
Anorectal	571	10.2	710	10.4	1046	11.7	1081	9.5
Oral	29	1.6	35	1.5	72	2.1	81	1.5
Women								
Urogenital	3426	10.6	3757	9.9	4385	10.3	4521	10.3
Anorectal	247	9.4	306	9.4	328	9.4	380	9.2
Oral	90	3.1	139	2.9	134	2.3	214	2.9

* Numbers do not add up to 100% since one client can have a positive test result at more than one location.

Footnote: Heterosexual men and women are not often tested anorectal or oral, therefore the fluctuation of positivity rates through the years has to be interpreted with caution.

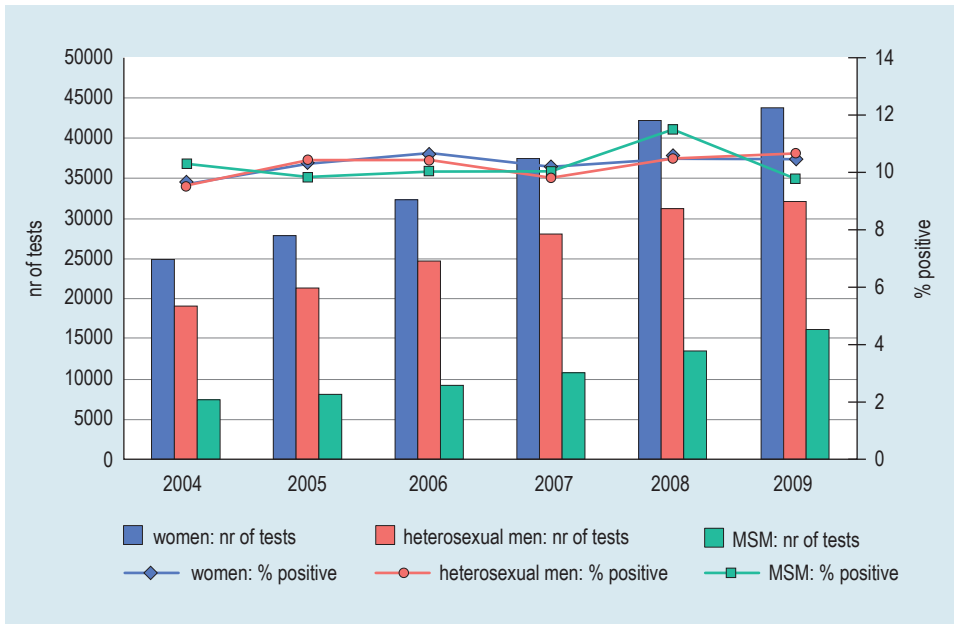


Figure 3.2: Total number of tests and positivity rate of chlamydia by gender and sexual preference, STI centres, the Netherlands, 2004–2009

3.3 General practitioner network

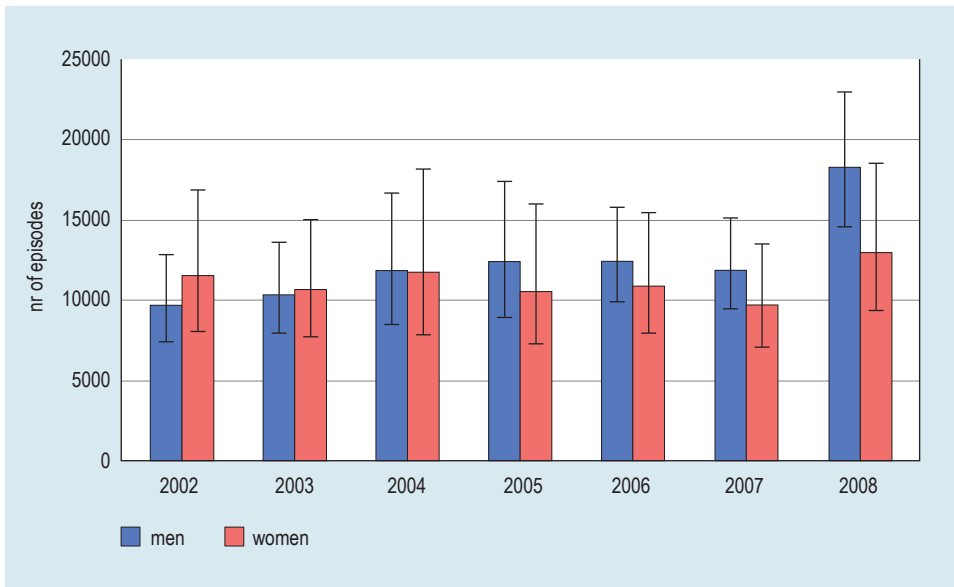


Figure 3.3: Estimated number (and 95% CI) of episodes of chlamydia at GPs by gender, based on extrapolation from 80 practices in the surveillance network of GPs in the Netherlands, 2002–2008 (Source: LINH)

Table 3.7: Reporting rate (number of episodes per 100,000 population) of chlamydia at GPs in the Netherlands by gender, 2002-2008

Year	Men		Women		Total	
	n/100,000	95% CI	n/100,000	95% CI	n/100,000	95% CI
2002	122.2	(93.6–162.0)	143.0	(99.8–208.6)	132.6	(96.7–185.3)
2003	129.6	(99.4–171.5)	131.2	(95.7–184.9)	130.4	(97.5–178.2)
2004	147.9	(106.8–208.6)	143.6	(96.3–223.3)	145.7	(101.6–215.9)
2005	154.7	(112.1–218.1)	129.6	(88.8–196.1)	142.1	(100.4–207.1)
2006	154.9	(123.2–197.1)	133.2	(96.7–188.7)	144.1	(109.9–192.9)
2007	148.1	(117.5–187.9)	118.3	(86.6–164.8)	133.2	(102.0–176.4)
2008	226.7	(181.7–284.8)	157.9	(113.5–224.3)	192.3	(147.6–254.5)

CI = confidence interval.

(Source: LINH)

3.4 Laboratory surveillance

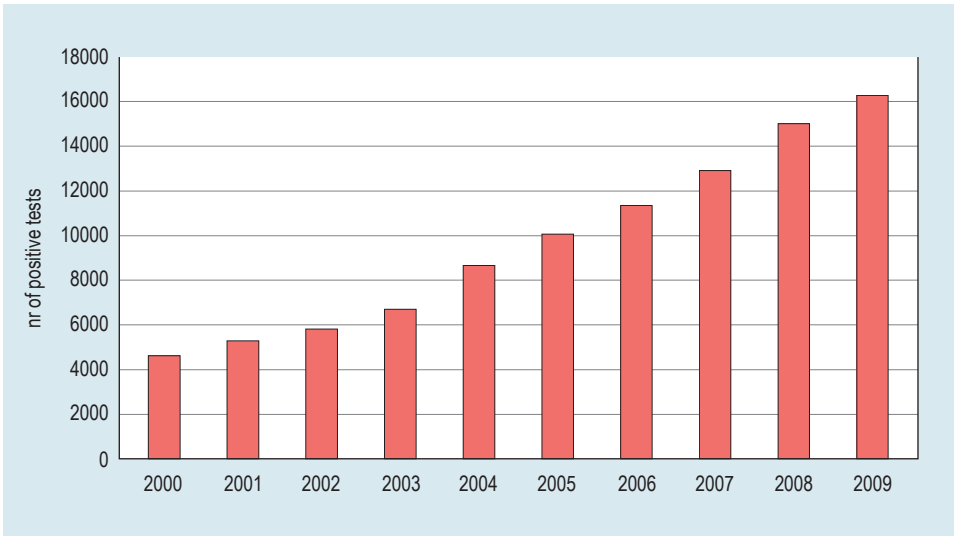


Figure 3.4: Number of positive test results for Chlamydia Trachomatis from 17 hospital and regional laboratories, 2000–2009

(Source: weekly virological reports)

3.5 Chlamydia Screening Implementation

Table 3.8: Number of persons (aged 16–29 years old) invited for the first screening round 2008–2009 of the Chlamydia Screening Implementation and numbers participated and tested positive, compared with persons (aged 16–29 years old) tested and found positive in the STI centres, per region

	Chlamydia Screening 1st round			STI centres, age group 16–29 years		
	Men	Women	Total	Men	Women	Total
South Limburg						
Invited	6848	6313	13161			
Participated/tested (%)	426 (6.2)	1024 (16.2)	1450 (11.0)	1509	1911	3420
Positive (%)	23 (5.4)	51 (5.0)	74 (5.1)	156 (10.3)	212 (11.1)	368 (10.8)
Amsterdam						
Invited	65268	74790	140057			
Participated/tested (%)	7050 (10.8)	16777 (22.4)	23827 (17.0)	6096	7550	13659
Positive (%)	235 (3.3)	621 (3.7)	856 (3.6)	868 (14.2)	935 (12.4)	1805 (13.2)
Rotterdam						
Invited	52692	55114	107806			
Participated/tested (%)	5544 (10.5)	10817 (19.6)	16361 (15.2)	2415	2922	5337
Positive (%)	238 (4.3)	594 (5.5)	832 (5.1)	326 (13.5)	424 (14.5)	750 (14.1)

(Source: CSI group including Municipal Health Services Amsterdam, Rotterdam, Maastricht and the RIVM)

3.6 Lymphogranuloma venereum

Table 3.9: Characteristics of MSM diagnosed with LGV, 2008–2009

	2008	2009
	(N=100) n (%)	(N=84*) n (%)
Median age (range)	41.6 (26–63)	41.0 (20–61)
Dutch ethnicity	74 (74.0)	64 (76.2)
Known HIV positive	71 (71.0)	59 (70.2)
LGV with anorectal chlamydia infection only	96 (96.0)	75 (89.3)
LGV with urethral chlamydia infection only	3 (3.0)	–
LGV with anorectal and urethral chlamydia	1 (1.0)	9 (10.7)
Concurrent gonorrhoea	26 (26.0)	24 (28.6)
Concurrent syphilis	11 (11.0)	3 (3.6)
Concurrent new HIV diagnosis	2 (2.0)	2 (2.4)

* In addition one case was reported in a man with unknown sexual preference.

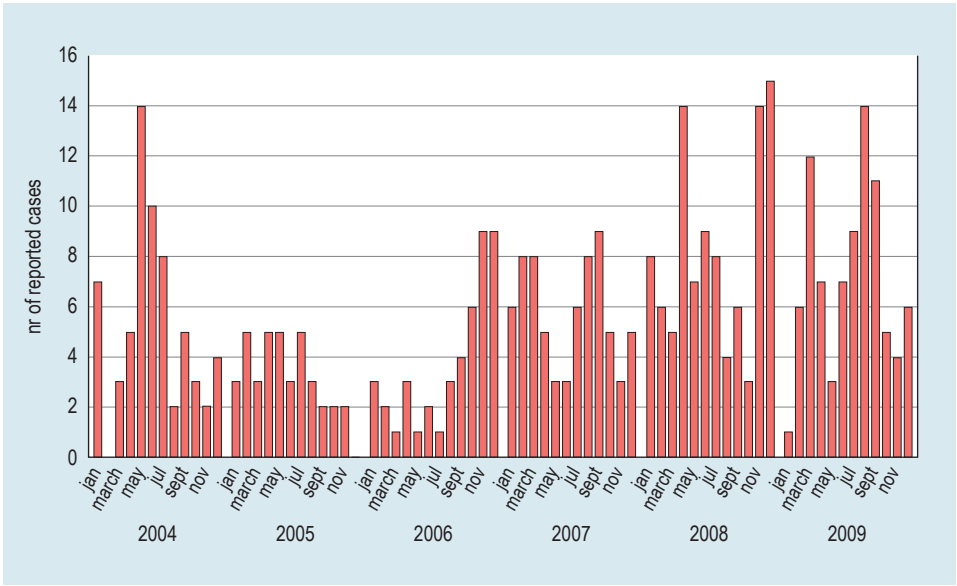


Figure 3.5: Number of cases of *Lymphogranuloma venereum* diagnosed per month in the STI centres, the Netherlands, 2004–2009

4 Gonorrhoea

4.1 Key points

- In 2009, 2,422 diagnoses of gonorrhoea were made in the national surveillance of STI centres in the Netherlands (20% in heterosexual men, 58% in MSM, 22% in women) compared with 1,964 diagnoses in 2008.
- Overall, the positivity rate was 2.6% in 2009 (MSM: 8.7%, heterosexual men: 1.5%, women: 1.2%) compared with 2.2% in 2008 (Figure 4.2).
- The percentage positive oral tests among MSM increased compared with 2008 (3.3% in 2008 and 4.8% in 2009).
- Positivity rates were highest in particular risk groups: persons already known with their HIV positivity (15%), those with a previous STI (11%) and in specific ethnic groups.
- Twenty-nine percent of the gonorrhoea cases had a chlamydia co-infection, 3% had a new HIV infection.
- For GPs, the number of reported gonorrhoea infections was estimated at 4,699 (95% CI 3,012–7,373) in 2008 (67% men and 33% women), an increase of 22% compared with 2007. The number of gonorrhoea infections among women was twice as high in 2008 than in 2007 (Figure 4.3).
- Ciprofloxacin resistance increased to 49% in 2009 and was highest in MSM (56%). Resistance to third generation cephalosporin was not found, although less susceptible isolates were found.

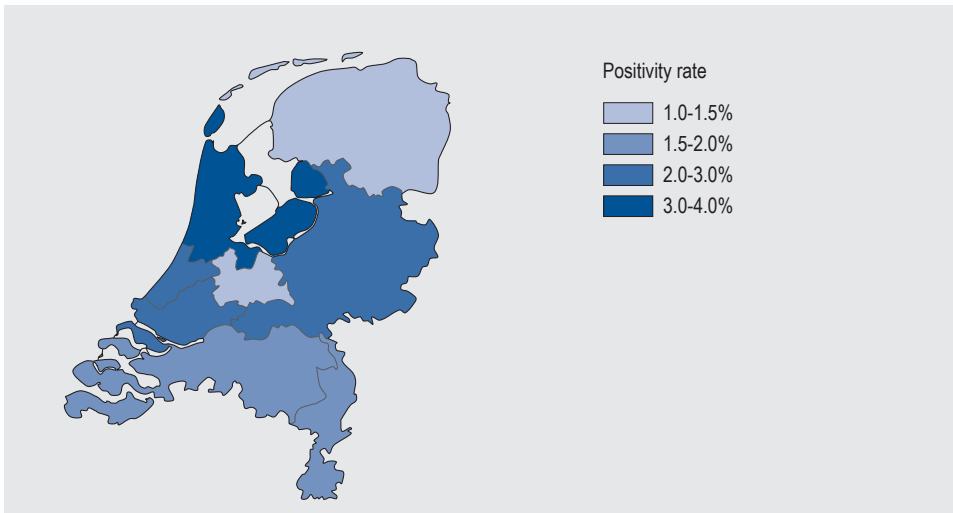


Figure 4.1: Positivity rates of gonorrhoea by STI centre, the Netherlands, 2009

4.2 Characteristics, risk groups and trends

Table 4.1: Number and percentage of positive tests for gonorrhoea by age, gender and sexual preference, 2009

Age (years)	Heterosexual men		MSM		Women	
	pos. tests	% pos.	pos. tests	% pos.	pos. tests	% pos.
0–14	0	0.0	0	0.0	1	1.2
15–19	41	2.8	38	8.7	103	1.9
20–24	110	1.2	162	9.3	197	1.1
25–29	115	1.5	229	10.7	67	0.7
30–34	59	1.4	235	9.9	44	1.1
35–39	48	1.7	232	9.8	34	1.4
40–44	35	1.4	217	8.6	42	2.1
45–49	35	2.1	160	8.1	25	1.8
50–54	16	1.6	69	5.8	15	2.0
≥ 55	23	2.1	60	4.2	10	2.3
Total	482	1.5	1402	8.7	538	1.2

Table 4.2: Number and percentage of positive tests for gonorrhoea by ethnicity, gender and sexual preference, 2009

Ethnicity	Heterosexual men		MSM		Women	
	pos. tests	% pos.	pos. tests	% pos.	pos. tests	% pos.
The Netherlands	297	1.1	1118	8.3	397	1.1
Turkey	17	4.4	7	7.8	4	4.3
North Africa/Morocco	19	3.7	5	5.6	4	1.7
Surinam	69	5.1	25	11.3	37	3.0
Netherlands Antilles/Aruba	30	5.5	26	14.4	10	2.2
Sub-Saharan Africa	16	2.5	10	13.2	5	1.0
Eastern Europe	9	4.0	23	8.4	34	2.6
Latin America	7	3.0	44	11.7	6	0.9
Asia	5	1.2	30	8.9	6	1.2
Europe other	2	0.4	26	9.6	31	2.6
Else	9	1.4	87	9.8	4	0.7
Unknown	2	1.4	1	7.1	0	0.0
Total	482	1.5	1402	8.7	538	1.2

Table 4.3: Number and percentage of positive tests for gonorrhoea by sexual behavioural characteristics, gender and sexual preference, 2009

	Heterosexual men		MSM		Women	
	pos. tests	% pos.	pos. tests	% pos.	pos. tests	% pos.
Number of partners in past 6 months						
0 partners	0	0.0	1	0.7	4	0.5
1 partner	108	1.2	112	5.7	131	0.8
2 partners	110	1.3	155	7.8	103	0.9
3 or more partners	245	1.8	1048	9.6	233	2.0
Unknown	19	1.4	86	7.2	67	1.6
Condom use at last sexual contact*						
No	153	1.2	301	8.7	243	1.4
Yes	50	0.9	173	6.7	82	1.2
Unknown	7	2.0	22	5.7	14	1.7
Previous GO/CT/syphilis in anamnesis						
No	397	1.4	872	7.2	408	1.1
Yes	71	3.0	499	14.1	111	2.6
Don't know	9	0.7	24	8.0	7	0.5
Unknown	5	1.0	7	2.3	12	1.6
Previous HIV test						
No	207	1.2	211	8.5	203	1.0
Yes, positive	2	5.7	386	15.4	5	13.5
Yes, negative	264	1.7	788	7.3	316	1.4
Yes, result unknown	3	3.4	4	6.0	2	1.4
Unknown	6	1.4	13	4.7	12	1.5
CSW, women						
No					450	1.1
Yes, in past 6 months					85	2.0
Unknown					3	2.0
Client of CSW, men						
No	423	1.5	1380	8.8		
Yes, in past 6 months	58	1.8	13	4.4		
Unknown	1	0.6	9	4.2		
Swinger*						
No	193	1.1	443	7.8	256	1.1
Yes	28	2.0	28	4.1	93	4.6
Unknown	4	2.0	8	3.6	4	1.2

* Voluntary question, condom use answered by 54% (n=50,285) and swinger by 56% (n=52,163) of persons tested for gonorrhoea.

Table 4.4: Concurrent STI by gender and sexual preference among persons diagnosed with gonorrhoea, 2009

Concurrent infection	Heterosexual men	MSM	Women
	(N=482) n (%)	(N=1402) n (%)	(N=538) n (%)
Chlamydia	161 (33.4)	334 (23.8)	196 (36.4)
Infectious syphilis	1 (0.2)	66 (4.7)	2 (0.4)
HIV newly diagnosed	2 (0.4)	59 (4.2)	1 (0.2)
Genital herpes	3 (0.6)	11 (0.8)	5 (0.9)
Genital warts	12 (2.5)	72 (5.1)	13 (2.4)
Hepatitis B, infectious	4 (0.8)	4 (0.3)	1 (0.2)

Table 4.5: Location of gonorrhoea infection by gender and sexual preference, 2009

Location	Heterosexual men	MSM	Women
	(N=482) n (%)	(N=1402) n (%)	(N=538) n (%)
Urogenital only	470 (97.5)	264 (18.8)	302 (56.1)
Anorectal only	0 (0.0)	403 (28.7)	34 (6.3)
Oral only	10 (2.1)	364 (26.0)	69 (12.8)
Urogenital and anorectal	1 (0.2)	83 (5.9)	42 (7.8)
Urogenital and oral	0 (0.0)	71 (5.1)	49 (9.1)
Anorectal and oral	1 (0.2)	150 (10.7)	9 (1.7)
Urogenital and anorectal and oral	0 (0.0)	50 (3.6)	18 (3.3)
Pooled samples*	0 (0.0)	17 (1.2)	15 (2.8)

* Pooled samples are samples from more than one anatomical site tested in one molecular test, so that location of infection is unknown.

Table 4.6: Number and percentage of positive tests for gonorrhoea by location, gender and sexual preference, 2006–2009

	2006		2007		2008		2009	
	pos. tests*	% pos.	pos. tests*	% pos.	pos. tests*	% pos.	pos. tests*	% pos.
Heterosexual men								
Urogenital	424	1.7	429	1.5	401	1.3	471	1.5
Anorectal	0	0.0	0	0.0	0	0.0	2	0.5
Oral	8	0.8	7	0.8	17	2.7	11	1.2
MSM								
Urogenital	494	5.3	430	4.0	453	3.4	475	3.0
Anorectal	485	7.0	554	6.7	573	5.4	698	5.3
Oral	184	2.7	209	2.6	353	3.3	651	4.8
Women								
Urogenital	326	1.0	358	1.0	362	0.9	426	1.0
Anorectal	65	1.0	88	1.2	81	1.1	106	1.4
Oral	63	0.8	89	0.9	121	1.2	154	1.3

* Numbers do not add up to 100% since one client can have a positive test result at more than one location.

Footnote: Heterosexual men and women are not frequently tested anorectal or oral, therefore the fluctuation of positivity rates through the years has to be interpreted with caution.

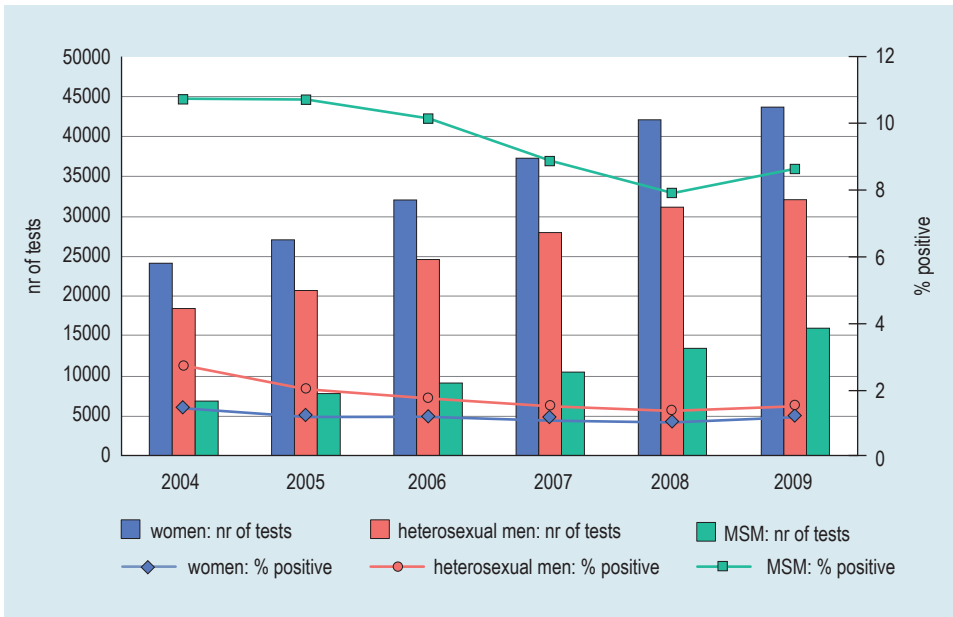


Figure 4.2: Total number of tests and positivity rate of gonorrhoea by gender and sexual preference, STI centres, the Netherlands, 2004–2009

4.3 General practitioner network

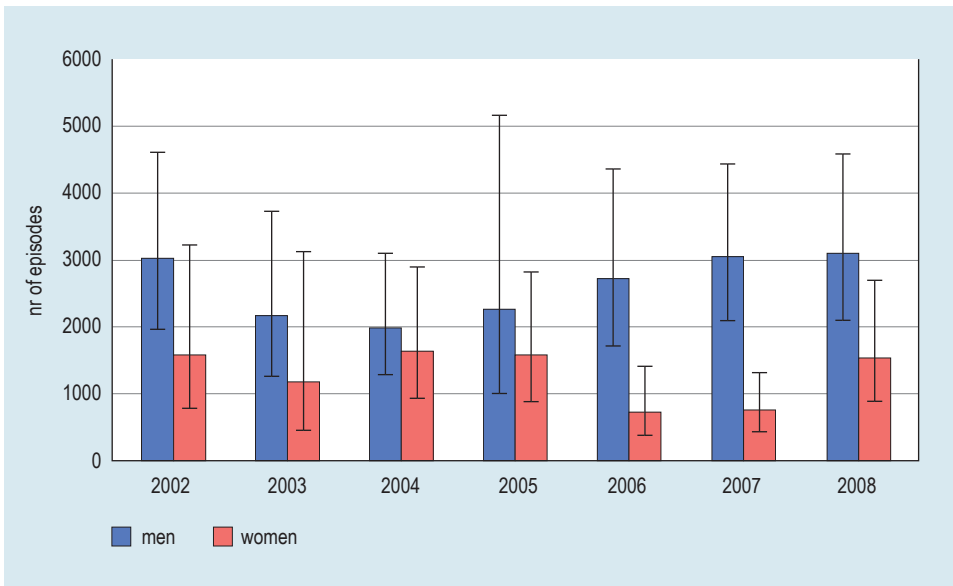


Figure 4.3: Estimated number (and 95% CI) of episodes of gonorrhoea at GPs by gender, based on extrapolation from 80 practices in the surveillance network of GPs in the Netherlands, 2002–2008 (Source: LINH)

Table 4.7: Reporting rate (number of episodes per 100,000 population) of gonorrhoea at GPs in the Netherlands by gender, 2002-2008

Year	Men		Women		Total	
	n/100,000	95% CI	n/100,000	95% CI	n/100,000	95% CI
2002	38.1	(24.9–58.4)	19.6	(9.6–40.1)	28.9	(17.2–49.2)
2003	27.3	(15.9–46.8)	14.7	(5.6–38.5)	21.0	(10.8–42.7)
2004	25.1	(16.2–38.8)	20.1	(11.3–35.5)	22.6	(13.8–37.1)
2005	28.4	(12.5–64.5)	19.4	(10.9–34.5)	23.9	(11.7–49.5)
2006	34.1	(21.3–54.5)	9.0	(4.7–17.2)	21.5	(13.0–35.9)
2007	38.1	(26.1–55.4)	9.2	(5.2–16.0)	23.6	(15.7–35.7)
2008	38.5	(25.9–57.1)	18.8	(10.8–32.8)	28.6	(18.4–44.9)

CI = confidence interval.

4.4 Antimicrobial resistance of gonococci in the Netherlands

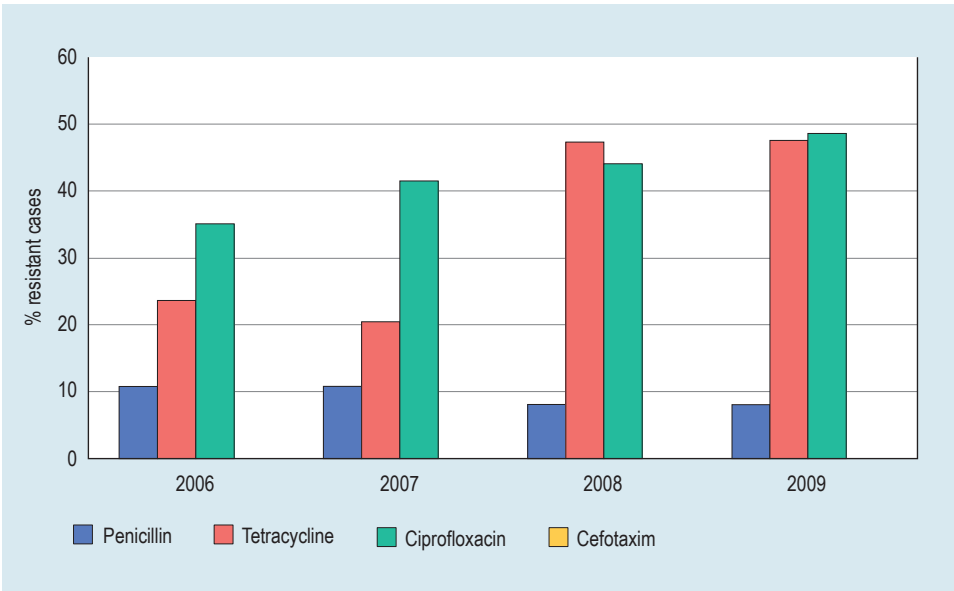


Figure 4.4: Gonococcal resistance (following CLSI breakpoints) in the Netherlands, proportion of resistant cases, 2006–2009

(Source: GRAS, STI centres, July 2006–December 2009)

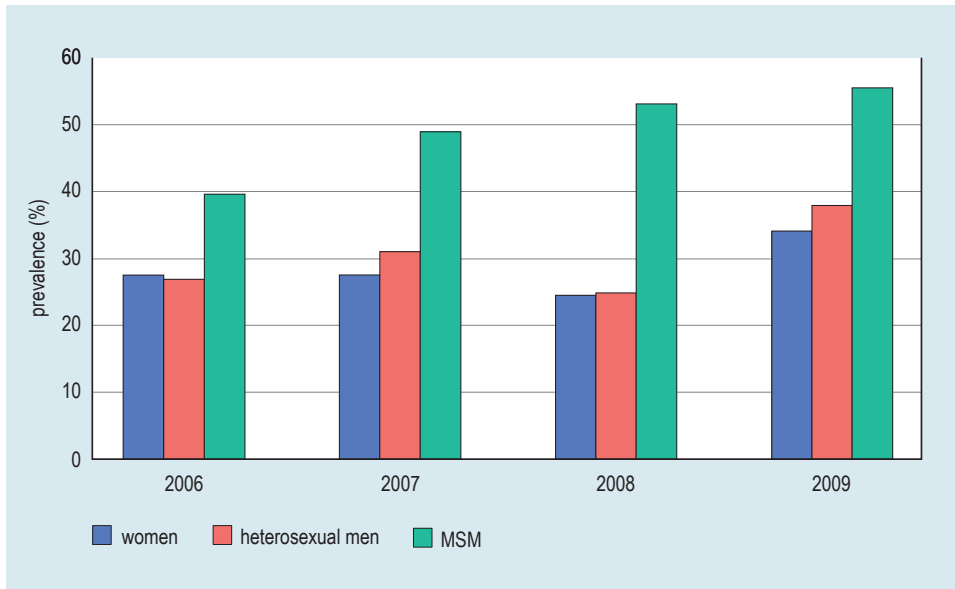


Figure 4.5: Prevalence of ciprofloxacin resistance (following CLSI breakpoints) by sexual preference and gender, 2006-2009

(Source: GRAS, STI centres, July 2006–December 2009)

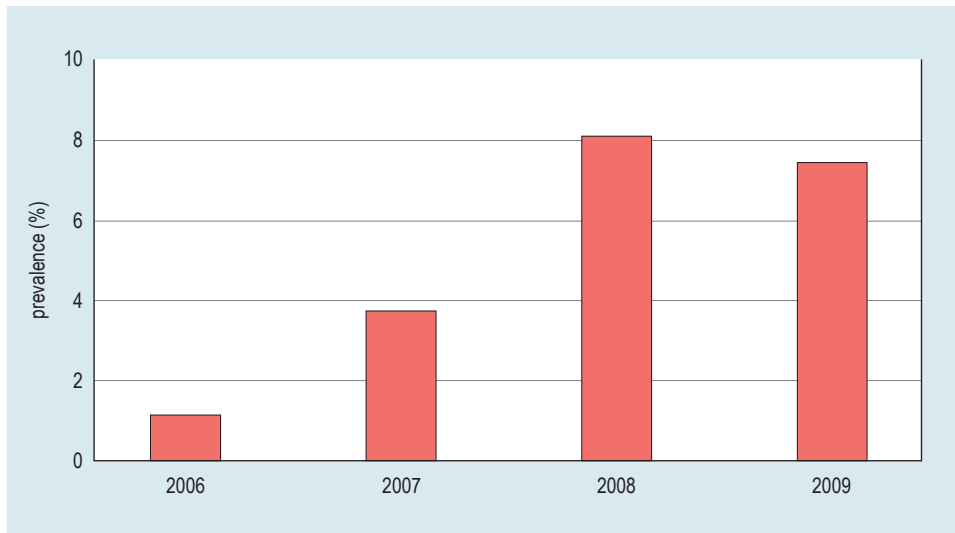


Figure 4.6: Prevalence of isolates less susceptible for cefotaxim (MIC > 0.125), 2006-2009

(Source: GRAS, STI centres, July 2006–December 2009)

5 Syphilis

5.1 Key points

- In 2009, 512 diagnoses of infectious syphilis were made in the STI centres in the Netherlands (8% in heterosexual men, 89% in MSM, 4% in women) compared with 599 diagnoses in 2008.
- As in previous years, the positivity rates among MSM decreased further from 4.3% in 2007, to 3.9% in 2008 and 2.8% in 2009. It was highest among MSM aged over 40 years. The positivity rates among heterosexual men and women remained low (Figure 5.2).
- Thirty-seven per cent of infectious syphilis cases were diagnosed in HIV positive MSM who were aware of their HIV positive status, 6% in newly diagnosed HIV cases.
- The positivity rate of infectious syphilis was much higher in known HIV positive MSM (7.5%) compared with MSM who previously tested HIV negative (1.8%).
- Of all MSM with syphilis, 16% had a co-infection with chlamydia and 15% had a co-infection with gonorrhoea.
- Data from screening of pregnant women showed an estimated prevalence of syphilis of 0.16% in 2008.

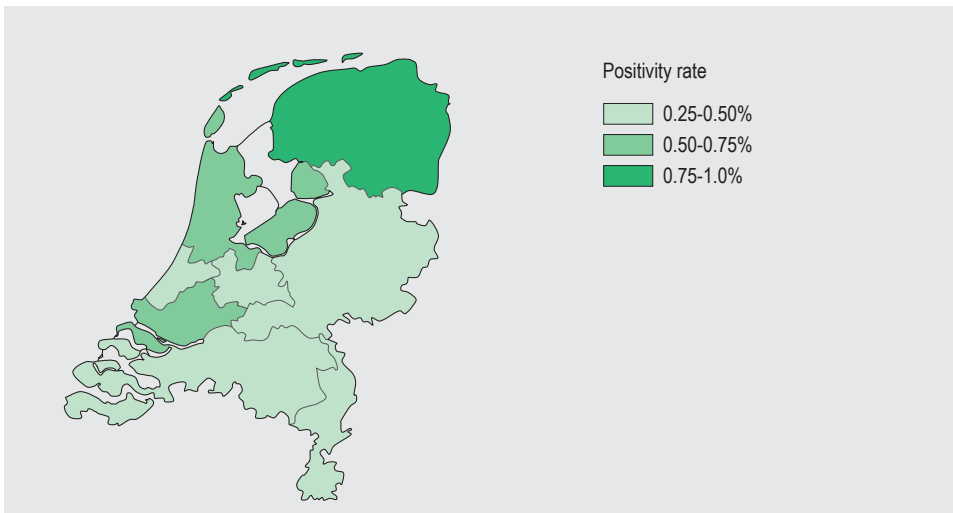


Figure 5.1: Positivity rates of infectious syphilis by STI centre, the Netherlands, 2009

5.2 Characteristics, risk groups and trends

Table 5.1: Number and percentage of positive tests for infectious syphilis by age, gender and sexual preference, 2009

Age (years)	Heterosexual men		MSM		Women	
	pos. tests	% pos.	pos. tests	% pos.	pos. tests	% pos.
0–14	0	0.0	0	0.0	0	0.0
15–19	1	0.07	7	1.6	2	0.04
20–24	5	0.05	36	2.1	4	0.02
25–29	9	0.1	42	2.0	3	0.0
30–34	7	0.2	57	2.4	3	0.1
35–39	3	0.1	68	2.9	1	0.04
40–44	7	0.3	83	3.3	2	0.1
45–49	1	0.06	78	4.0	1	0.1
50–54	3	0.3	42	3.5	1	0.1
≥ 55	3	0.3	42	2.9	1	0.2
Unknown	0	0.0	0	0.0	0	0.0
Total	39	0.1	455	2.8	18	0.04

Table 5.2: Number and percentage of positive tests for infectious syphilis by ethnicity, gender and sexual preference, 2009

Ethnicity	Heterosexual men		MSM		Women	
	pos. tests	% pos.	pos. tests	% pos.	pos. tests	% pos.
The Netherlands	22	0.1	342	2.6	15	0.04
Turkey	1	0.3	1	1.1	0	0.0
North Africa/Morocco	3	0.6	4	4.4	0	0.0
Surinam	4	0.3	11	5.0	0	0.0
Netherlands Antilles/Aruba	2	0.4	10	5.5	0	0.0
Sub-Saharan Africa	2	0.3	2	2.6	0	0.0
Eastern Europe	1	0.4	8	2.9	1	0.1
Latin America	3	1.3	23	6.1	0	0.0
Asia	0	0.0	8	2.4	0	0.0
Europe other	0	0.0	15	5.6	1	0.1
Else	1	0.2	30	3.4	1	0.2
Unknown	0	0.0	1	7.1	0	0.0
Total	39	0.12	455	2.8	18	0.04

Table 5.3: Number and percentage of positive tests for infectious syphilis by sexual behavioural characteristics, gender and sexual preference, 2009

	Heterosexual men		MSM		Women	
	pos. tests	% pos.	pos. tests	% pos.	pos. tests	% pos.
Number of partners in past 6 months						
0 partners	0	0.0	5	3.2	0	0.0
1 partner	12	0.1	47	2.4	5	0.03
2 partners	13	0.2	57	2.9	4	0.04
3 or more partners	11	0.1	292	2.7	6	0.05
Unknown	3	0.2	54	4.6	3	0.1
Condom use at last sexual contact*						
No	11	0.1	119	3.5	5	0.03
Yes	5	0.1	54	2.1	3	0.05
Unknown	1	0.3	6	1.6	0	0.0
Previous GO/CT/syphilis in anamnesis						
No	32	0.1	309	2.6	16	0.04
Yes	2	0.1	134	3.8	1	0.02
Don't know	4	0.3	8	2.7	0	0.0
Unknown	1	0.2	4	1.3	1	0.1
Previous HIV test						
No	22	0.1	59	2.4	6	0.03
Yes, positive	5	14.3	189	7.5	1	2.8
Yes, negative	12	0.1	197	1.8	11	0.1
Yes, result unknown	0	0.0	6	9.0	0	0.0
Unknown	0	0.0	4	1.4	0	0.0
CSW, women						
No					14	0.04
Yes, in past 6 months					3	0.07
Unknown					1	0.72
Client of CSW, men						
No	33	0.1	445	2.8		
Yes, in past 6 months	5	0.2	5	1.7		
Unknown	1	2.6	5	2.4		
Swinger*						
No	18	0.1	160	2.8	8	0.03
Yes	1	0.1	6	0.9	0	0.0
Unknown	0		4	1.8	0	0.0

* Voluntary question, condom use answered by 54% (N=50,004) and swinger by 56% (N=51,811) of persons tested for syphilis.

Table 5.4: Concurrent STI by gender and sexual preference among persons diagnosed with syphilis, 2009

Concurrent infection	Heterosexual men	MSM	Women
	(N=39) n (%)	(N=455) n (%)	(N=18) n (%)
Chlamydia	4 (10.3)	72 (15.8)	1 (5.6)
Gonorrhoea	1 (2.6)	66 (14.5)	2 (11.1)
HIV newly diagnosed	1 (2.6)	26 (5.7)	0 (0.0)
Genital herpes	0 (0.0)	4 (0.9)	2 (11.1)
Genital warts	1 (2.6)	24 (5.3)	0 (0.0)
Hepatitis B, infectious	1 (2.6)	2 (0.4)	0 (0.0)

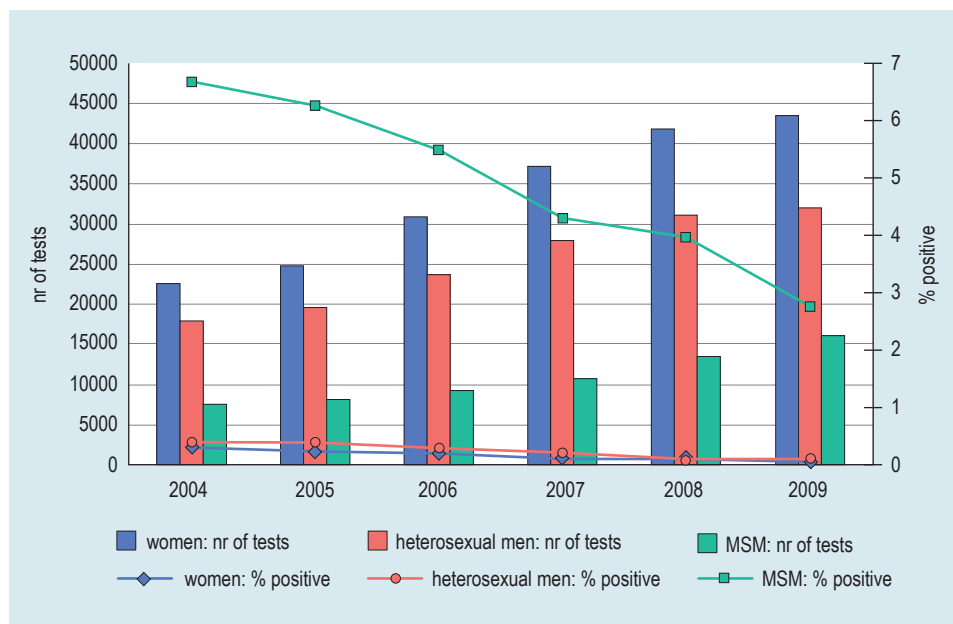


Figure 5.2: Total number of tests and positivity rate of infectious syphilis by gender and sexual preference, STI centres, the Netherlands, 2004–2009

5.3 Screening pregnant women

Table 5.5: Syphilis prevalence estimates in pregnant women, based on test results of antenatal screening, 2006–2008

Year	No. of women screened	Positive result 12 weeks test	Confirmed positive test results (%)	Prevalence estimate [min, max] *
2006	185,941	320	142 (44%)	0.12 [0.08–0.13]
2007	186,137	331	181 (55%)	0.14 [0.10–0.15]
2008	190,139	359	197 (55%)	0.16 [0.10–0.17]

* Prevalence estimated under the assumption that pregnant women with a first positive test result without a confirmation test would be as often positive as those with a confirmation test; minimum prevalence: number of confirmed positive test results divided by the total number of registered pregnant women; maximum prevalence: under the assumption that all pregnant women with a first positive test result without a confirmation test would also have a positive confirmation test.

** Exclusive terminated pregnancies (induced or spontaneous): 2006 (n=3), 2007 (n=1), 2008 (n=1).

(Source: Praeventis, RIVM)

5.4 Congenital syphilis

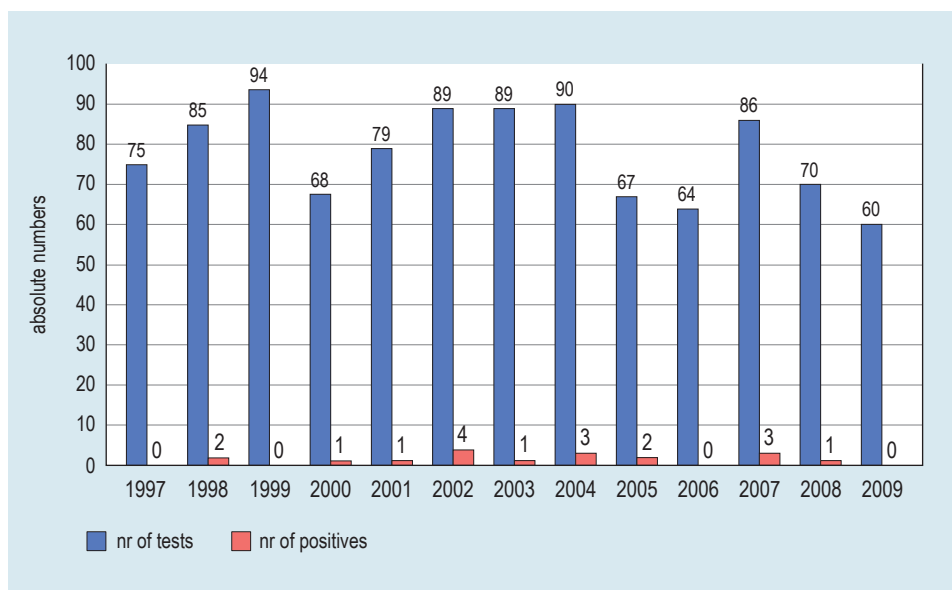


Figure 5.3: Number of tests of neonates and young infants (<1 year) suspected of being infected with congenital syphilis and the number of IgM positives, 1997–2009

(Source: Clb/LIS)

Viral STI

6 HIV and AIDS

6.1 Key points

- In 2009, 387 individuals were newly diagnosed with HIV at the STI clinics in the Netherlands (79% in MSM, 11% in heterosexual men and 10% women) compared with 393 individuals in 2008.
- Among MSM the positivity rate was 2.4% (in 2008 3.0%), among heterosexual men 0.1% (in 2008 0.2%) and among women 0.1% (in 2008 0.1%).
- HIV test uptake increased from 56% in 2004 to 92% in 2009 among STI clinic attendees who were not previously diagnosed with HIV.
- Among newly diagnosed HIV positive MSM, 18% had a concurrent chlamydia infection and 19% a gonorrhoea infection. Among known HIV-positive visitors, 18% were diagnosed with chlamydia and 15% with gonorrhoea.
- We estimated that 21,500 (95% CI 17,204–28,694) people were living with HIV/AIDS in the Netherlands as of January 2008, aged between 15 and 70 years. An estimated 40% (95% CI 25–55%) of the HIV-infected population remained undiagnosed, varying from 17% (95% CI 11–26%) in Amsterdam to 46% (95% CI 24–65%) in the remainder of the country. The estimated number of PLWHA increased by 10% compared with 2005⁵.
- A cumulative total of 16,555 HIV patients in care was reported up to December 2009. In 2009, 1,252 new HIV patients were reported in care, of whom 812 were newly diagnosed in 2009 (incomplete due to reporting delay). The proportion of MSM accounting for new HIV patients in care was 66% in 2009. The proportion of heterosexuals was 27%.

⁵ van Veen MG, NCHIV 2009, poster 24:
<http://www.nchiv2009.nl/_site1349/images/24_epidemiology_HIV_estimate_NL.pdf>

6.2 STI centres

Table 6.1: Number and percentage of positive tests for newly diagnosed HIV at the STI centres by age, gender and sexual preference, 2009

Age (years)	Heterosexual men		MSM		Women	
	pos. tests	% pos.	pos. tests	% pos.	pos. tests	% pos.
0–14	0	0.0	0	0.0	0	0.0
15–19	0	0.0	2	0.5	1	0.02
20–24	5	0.06	31	1.9	8	0.05
25–29	8	0.1	55	2.9	17	0.2
30–34	7	0.2	49	2.5	2	0.05
35–39	10	0.4	47	2.6	5	0.2
40–44	5	0.2	57	3.1	4	0.2
45–49	3	0.2	32	2.4	1	0.1
50–54	3	0.3	16	1.8	1	0.1
≥ 55	2	0.2	15	1.4	1	0.2
Unknown	0	0.0	0	0.0	0	0.0
Total	43	0.1	304	2.4	40	0.1

Table 6.2: Number and percentage of positive tests for newly diagnosed HIV at the STI centres by ethnicity, gender and sexual preference, 2009

Ethnicity	Heterosexual men		MSM		Women	
	pos. tests	% pos.	pos. tests	% pos.	pos. tests	% pos.
The Netherlands	21	0.1	218	2.0	23	0.1
Turkey	1	0.3	5	6.9	0	0.0
North Africa/Morocco	1	0.2	5	6.0	0	0.0
Surinam	4	0.3	2	1.3	2	0.2
Netherlands Antilles/Aruba	0	0.0	2	1.5	0	0.0
Sub-Saharan Africa	7	1.2	4	6.9	4	0.9
Eastern Europe	3	1.3	8	3.5	3	0.2
Latin America	1	0.5	12	4.7	3	0.5
Asia	0	0.0	11	3.9	2	0.4
Europe other	2	0.4	9	3.7	2	0.2
Else	2	0.3	27	4.3	1	0.2
Unknown	1	2.1	1	10.0	0	0.0
Total	43	0.1	304	2.4	40	0.1

Table 6.3: Number and percentage of positive tests for newly diagnosed HIV at the STI centres by sexual behavioural characteristics, gender and sexual preference, 2009

	Heterosexual men		MSM		Women	
	pos. tests	% pos.	pos. tests	% pos.	pos. tests	% pos.
Number of partners in past 6 months						
0 partners	1	0.2	2	1.6	2	0.3
1 partner	13	0.2	36	2.1	19	0.1
2 partners	17	0.2	33	2.0	4	0.04
3 or more partners	9	0.07	211	2.5	7	0.1
Unknown	3	0.3	22	2.4	8	0.2
Condom use at last sexual contact*						
No	13	0.1	82	2.8	19	0.1
Yes	8	0.2	60	2.7	7	0.1
Unknown	2	0.6	4	2.7	1	0.1
Previous GO/CT/syphilis in anamnesis						
No	37	0.1	225	2.2	33	0.1
Yes	1	0.05	69	3.3	5	0.1
Don't know	2	0.2	3	1.1	1	0.1
Unknown	3	0.7	7	2.6	1	0.1
Previous HIV test						
No	19	0.1	59	2.6	17	0.1
Yes, positive	0	0.0	0	0.0	0	0.0
Yes, negative	17	0.1	233	2.3	21	0.1
Yes, result unknown	4	5.1	10	17.2	2	1.6
Unknown	3	0.8	2	0.8	0	0.0
CSW, women						
No					31	0.1
Yes, in past 6 months					9	0.2
Unknown					0	0.0
Client of CSW, men						
No	33	0.1	297	2.4		
Yes, in past 6 months	10	0.3	4	1.5		
Unknown	0	0.0	3	1.6		
Swinger*						
No	23	0.1	127	2.6	24	0.1
Yes	0	0.0	8	1.3	2	0.1
Unknown	0	0.0	1	0.5	0	0.0

* Voluntary question, condom use answered by 54% (N=44,827) and swinger by 56% (N=46,763) of persons tested for HIV.

Table 6.4: Concurrent STI by gender and sexual preference among persons newly diagnosed with HIV at the STI centres, 2009

Concurrent infection	Heterosexual men	MSM	Women
	(N=43) n (%)	(N=304) n (%)	(N=40) n (%)
Chlamydia	5 (11.6)	55 (18.1)	2 (5.0)
Gonorrhoea	2 (4.7)	59 (19.4)	1 (2.5)
Infectious syphilis	1 (2.3)	26 (8.6)	0 (0.0)
Genital herpes	1 (2.3)	6 (2.0)	0 (0.0)
Genital warts	3 (7.0)	15 (4.9)	0 (0.0)
Hepatitis B, infectious	1 (2.3)	4 (1.3)	0 (0.0)

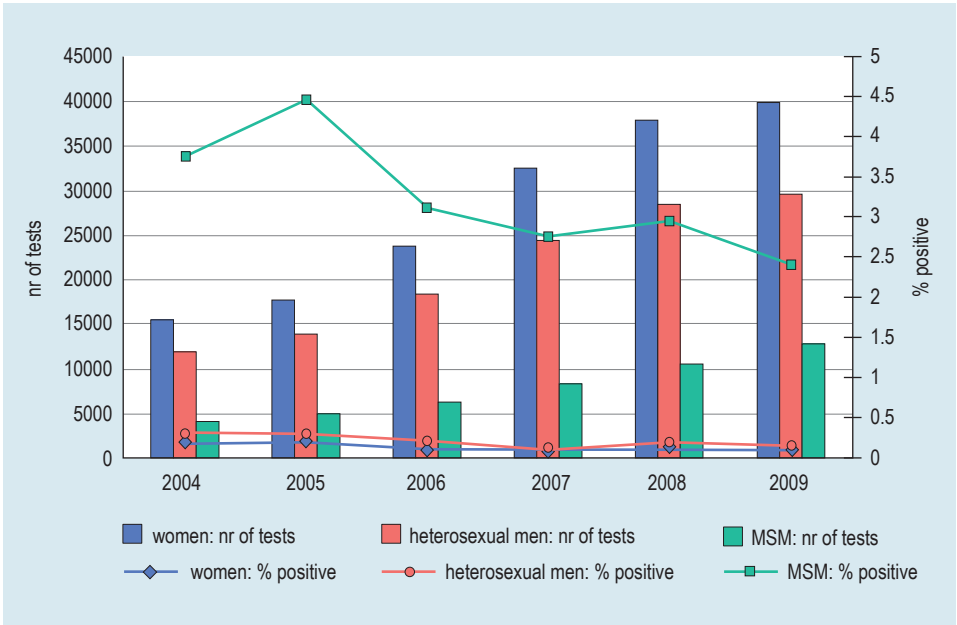


Figure 6.1: Total number of tests and positivity rate of new HIV cases by gender and sexual preference, STI centres, the Netherlands, 2004–2009

Table 6.5: HIV positivity rates among STI clinic attendees and other test sites, 2004–2009

Region and source	2004	2005	2006	2007	2008	2009
MSM						
STI clinic Amsterdam						
Regular	5.7 %	6.0 %	4.0 %	3.5 %	3.5 %	2.3 %
Anonymous*	18.8 % [#]	19.4 %	21.5 %	21.9 %	29.3 %	27.0 %
Anonymous**			5.1 %	1.9 %	3.5 %	3.0 %
STI clinic Rotterdam						
Regular	4.5 %	6.3 %	3.6 %	3.0 %	3.1 %	3.3 %
Anonymous*	32.1 %	25.7 %	38.5 %	58.4 %	60.7 %	NA
Anonymous**			3.6 %	12.5 %	13.0 %	5.9 %
STI (sentinel) surveillance network	4.2 %	5.0 %	3.1 %	2.8 %	3.0 %	2.4 %
Heterosexual risk groups						
STI clinic Amsterdam						
Regular, men	0.2 %	0.3 %	0.3 %	0.2 %	0.2 %	0.2 %
Anonymous, men*	0.5 % [#]	0.0 %	0.4 %	0.4 %	0.3 %	0.1 %
Anonymous, men**			0.1 %	0.4 %	0.1 %	0.0 %
Regular, women	0.3 %	0.4 %	0.2 %	0.3 %	0.1 %	0.1 %
Anonymous, women*	0.2 % [#]	0.4 %	0.4 %	0.0 %	0.0 %	0.1 %
Anonymous, women**			0.2 %	0.0 %	0.0 %	0.0 %
STI clinic Rotterdam						
Regular, men	1.0 %	0.3 %	0.2 %	0.1 %	0.2 %	0.2 %
Anonymous, men*	0.9 %	0.4 %	0.5 %	0.6 %	10.0 %	NA
Anonymous, men**			0.0 %	0.0 %	0.0 %	0.0 %
Regular, women	0.3 %	0.2 %	0.2 %	0.1 %	0.2 %	0.1 %
Anonymous, women*	0.7 %	0.5 %	0.2 %	2.8 %	0.0 %	NA
Anonymous, women**			0.0 %	0.0 %	0.0 %	0.0 %
STI (sentinel) surveillance network						
Men	0.3 %	0.3 %	0.2 %	0.1 %	0.2 %	0.1 %
Women	0.2 %	0.2 %	0.1 %	0.1 %	0.1 %	0.1 %

* Known HIV-infected included; ** Excluding known HIV-infected STI clinic attendees; [#] based on 1 research period.

NA = not available.

6.3 HIV treatment centres

6.3.1 HIV cases newly diagnosed in 2009 versus all registered HIV cases (cumulative)

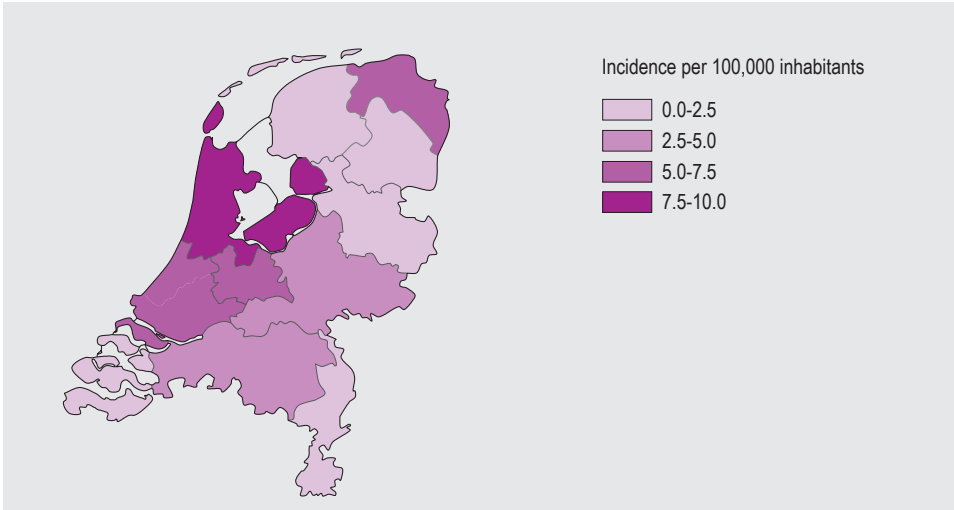


Figure 6.2: Number of new HIV diagnoses per 100,000 inhabitants, the Netherlands, 2009
Footnote: calculations based on HIV infections recorded in the various HIV treatment centres in each province.

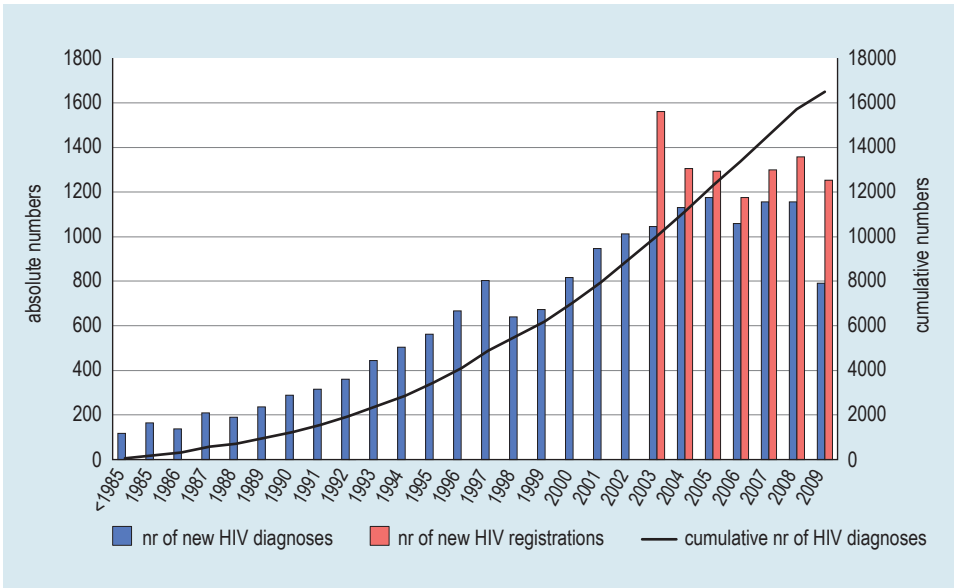


Figure 6.3: Number of newly diagnosed HIV cases (blue; cumulative: black) and newly registered HIV patients (red) by year, <1985–2009

Footnote: only HIV patients with a known date of diagnosis are included (268 cases excluded from the analysis).
(Source: ATHENA: 1996–2001, national registration from 2002 to date (Source: Stichting HIV Monitoring, 2009 incomplete))

Table 6.6a: Number of HIV cases diagnosed in 2009 by age (at year of diagnosis) and gender

Age (years)	Men (%)	Women (%)	Total (%)
0–14	1 (0.1)	1 (0.8)	2 (0.2)
15–19	13 (1.9)	5 (4.2)	18 (2.2)
20–24	46 (6.6)	11 (9.2)	57 (7.0)
25–29	95 (13.7)	31 (25.8)	126 (15.5)
30–39	191 (27.6)	30 (25.0)	221 (27.2)
40–49	225 (32.5)	22 (18.3)	247 (30.4)
50–59	93 (13.4)	18 (15.0)	111 (13.7)
60–69	25 (3.6)	1 (0.8)	26 (3.2)
70–79	2 (0.3)	1 (0.8)	3 (0.4)
≥ 80	0 (0.0)	0 (0.0)	0 (0.0)
Unknown	1 (0.1)	0 (0.0)	1 (0.1)
Total	692	120	812

Table 6.6b: Cumulative number of HIV cases by age (at year of diagnosis) and gender up to 2009

Age (years)	Men (%)	Women (%)	Total (%)
0–14	126 (1.0)	97 (2.8)	223 (1.3)
15–19	183 (1.4)	231 (6.6)	414 (2.5)
20–24	916 (7.0)	549 (15.6)	1465 (8.8)
25–29	1888 (14.5)	802 (22.7)	2690 (16.2)
30–39	5056 (38.8)	1193 (33.8)	6249 (37.7)
40–49	3269 (25.1)	429 (12.2)	3698 (22.3)
50–59	1253 (9.6)	167 (4.7)	1420 (8.6)
60–69	281 (2.2)	49 (1.4)	330 (2.0)
70–79	53 (0.4)	5 (0.1)	58 (0.4)
≥ 80	1 (0.0)	2 (0.1)	3 (0.02)
Unknown	3 (0.02)	2 (0.1)	5 (0.03)
Total	13029	3526	16555

Table 6.7a: Number of HIV cases diagnosed in 2009 by main reported transmission risk group and gender

Transmission risk group	Men (%)	Women (%)	Total (%)
MSM	534 (77.2)	–	534 (65.8)
Heterosexual contact	115 (16.6)	108 (90.0)	223 (27.5)
Injecting drug use	1 (0.1)	0 (0.0)	1 (0.1)
Blood (products)	1 (0.1)	1 (0.8)	2 (0.2)
Mother to child	1 (0.1)	3 (2.5)	4 (0.5)
Needle stick injury	0 (0.0)	0 (0.0)	0 (0.0)
Other/unknown	40 (5.8)	8 (6.7)	48 (5.9)
Total	692	120	812

Table 6.7b: Cumulative number of HIV cases by main reported transmission risk group and gender up to 2009

Transmission risk group	Men (%)	Women (%)	Total (%)
MSM	9132 (70.1)	—	9132 (55.2)
Heterosexual contact	2298 (17.6)	2996 (85.0)	5294 (32.0)
Injecting drug use	495 (3.8)	180 (5.1)	675 (4.1)
Blood (products)	127 (1.0)	76 (2.2)	203 (1.2)
Mother to child	96 (0.7)	87 (2.5)	183 (1.1)
Needle stick injury	20 (0.2)	6 (0.2)	26 (0.2)
Other/unknown	861 (6.6)	181 (5.1)	1042 (6.3)
Total	13029	3526	16555

Table 6.8a: Number of HIV cases diagnosed in 2009 by age and transmission risk group

Age (years)	MSM	Heterosexual contact	Other/ unknown*
	n (%)	n (%)	n (%)
0–14	0 (0.0)	0 (0.0)	2 (3.6)
15–19	12 (2.2)	4 (1.8)	2 (3.6)
20–24	40 (7.5)	14 (6.3)	3 (5.5)
25–29	77 (14.4)	40 (17.9)	9 (16.4)
30–39	147 (27.5)	60 (26.9)	14 (25.5)
40–49	171 (32.0)	64 (28.7)	12 (21.8)
50–59	69 (12.9)	35 (15.7)	7 (12.7)
60–69	16 (3.0)	4 (1.8)	6 (10.9)
70–79	1 (0.2)	2 (0.9)	0 (0.0)
≥ 80	0 (0.0)	0 (0.0)	0 (0.0)
Unknown	1 (0.2)	0 (0.0)	0 (0.0)
Total	534	223	55

* Including IDU (n=1), blood(products) (n=2), mother to child (n=4).

Table 6.8b: Cumulative number of HIV cases by age and transmission risk group up to 2009

Age (years)	MSM	Heterosexual contact	Injecting drug use	Blood (products)*	Mother to child	Other/ unknown
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
0–14	2 (0.02)	5 (0.1)	0 (0.0)	25 (10.9)	177 (98.3)	14 (1.3)
15–19	95 (1.0)	250 (4.7)	19 (2.8)	14 (6.1)	3 (1.7)	33 (3.2)
20–24	636 (7.0)	627 (11.8)	91 (13.5)	23 (10.0)	0 (0.0)	88 (8.5)
25–29	1384 (15.2)	982 (18.5)	133 (19.7)	35 (15.3)	0 (0.0)	156 (15.0)
30–39	3601 (39.4)	1936 (36.6)	281 (41.7)	69 (30.1)	0 (0.0)	361 (34.7)
40–49	2355 (25.8)	951 (18.0)	135 (20.0)	26 (11.4)	0 (0.0)	231 (22.2)
50–59	865 (9.5)	405 (7.7)	14 (2.1)	23 (10.0)	0 (0.0)	113 (10.9)
60–69	169 (1.9)	115 (2.2)	1 (0.1)	11 (4.8)	0 (0.0)	34 (3.3)
70–79	24 (0.3)	20 (0.4)	0 (0.0)	3 (1.3)	0 (0.0)	11 (1.1)
≥ 80	0 (0.0)	3 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Total**	9131	5294	674	229	180	1041

* Including needle stick injury; ** Unknown age not included.

Table 6.9a: Number of HIV cases diagnosed in 2009 by region of origin and transmission risk group

Age (years)	MSM	Heterosexual contact	Other/ unknown*
	n (%)	n (%)	n (%)
The Netherlands	403 (75.5)	90 (40.4)	23 (41.8)
Western Europe	31 (5.8)	3 (1.3)	1 (1.8)
Central Europe	16 (3.0)	8 (3.6)	3 (5.5)
Eastern Europe	3 (0.6)	3 (1.3)	2 (3.6)
Sub-Saharan Africa	7 (1.3)	76 (34.1)	14 (25.5)
Caribbean	18 (3.4)	7 (3.1)	1 (1.8)
Latin America	25 (4.7)	19 (8.5)	6 (10.9)
North America	2 (0.4)	1 (0.4)	0 (0.0)
North Africa and Middle East	8 (1.5)	7 (3.1)	0 (0.0)
Australia and Pacific	4 (0.7)	1 (0.4)	0 (0.0)
South (East) Asia	16 (3.0)	7 (3.1)	5 (9.1)
Unknown	1 (0.2)	1 (0.4)	0 (0.0)
Total	534	223	55

* Including IDU (n=1), blood(products) (n=2), mother to child (n=4).

Table 6.9b: Cumulative number of HIV cases by transmission risk group and five most common regions of origin up to 2009

Region of origin	MSM	Heterosexual contact	Injecting drug use	Blood (products)*	Mother to child	Other/ unknown
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
The Netherlands	6638 (83.5)	1605 (34.2)	421 (72.0)	111 (55.8)	98 (57.0)	469 (53.8)
Sub-Saharan Africa	122 (1.5)	2299 (48.9)	7 (1.2)	68 (34.2)	66 (38.4)	251 (28.8)
Surinam	254 (3.2)	404 (8.6)	20 (3.4)	8 (4.0)	1 (0.6)	41 (4.7)
Neth. Antilles/ Aruba	227 (2.9)	223 (4.7)	11 (1.9)	2 (1.0)	3 (1.7)	24 (2.8)
Western Europe	712 (9.0)	167 (3.6)	126 (21.5)	10 (5.0)	4 (2.3)	86 (9.9)

* Including needle stick injury.

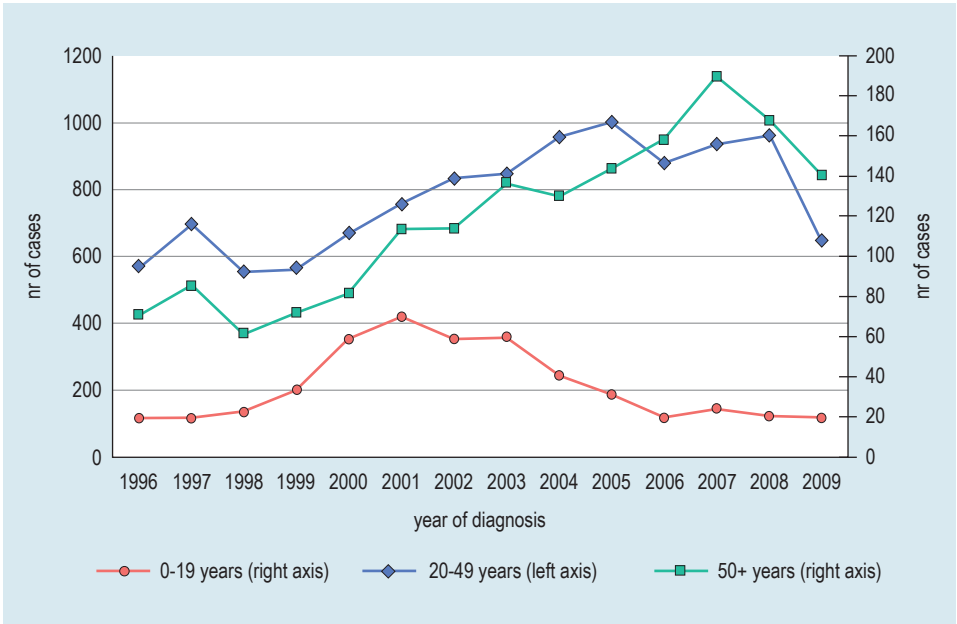


Figure 6.4: Number of HIV cases by age group (left axis: 20–49, right axis: 0–19 and 50+) and year of diagnosis, 1996–2009
(Source: Stichting HIV Monitoring, 2009 incomplete)

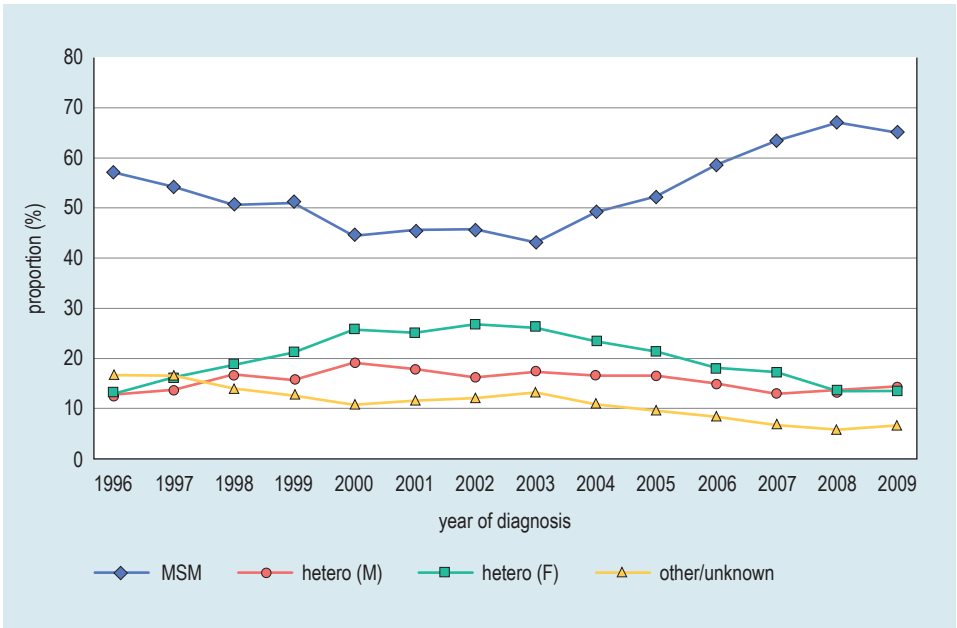


Figure 6.5: Proportion of annual HIV cases in care by transmission risk group and year of diagnosis, 1996–2009
(Source: Stichting HIV Monitoring, 2009 incomplete)

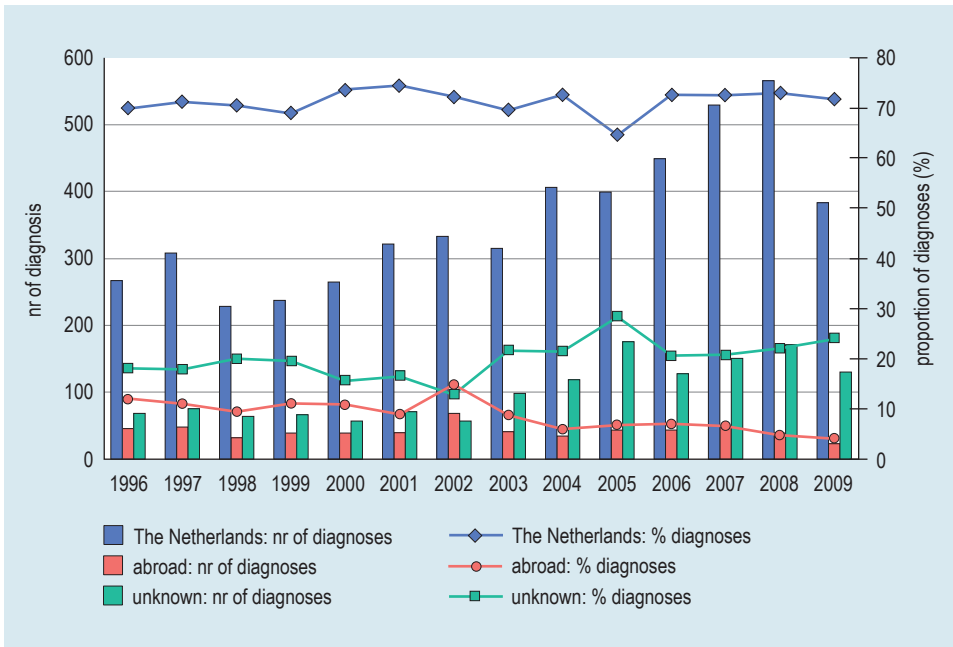


Figure 6.6: Reported country of infection of MSM by year of diagnosis, 1996–2009
(Source: Stichting HIV Monitoring, 2009 incomplete)

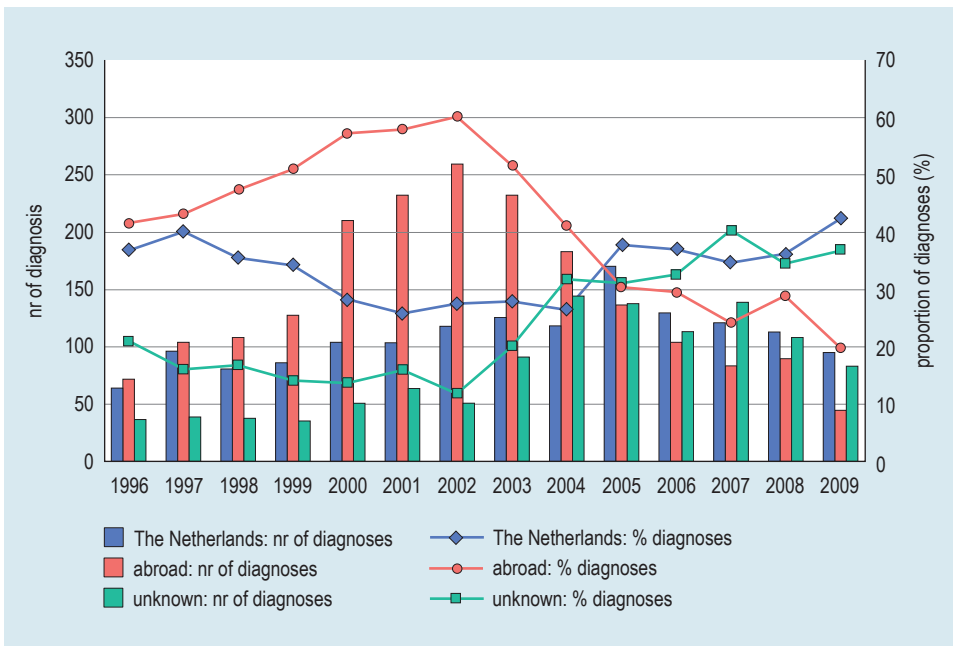


Figure 6.7: Reported country of infection of heterosexuals by year of diagnosis, 1996–2009
(Source: Stichting HIV Monitoring, 2009 incomplete)

6.3.2 AIDS cases and deaths among HIV patients

Table 6.10: Number (per year and cumulative) of AIDS diagnoses and deaths among HIV patients, 1983–2009

Year	AIDS diagnoses (per year)	AIDS diagnoses (cumulative)	Deaths (per year)	Deaths (cumulative)
1983	22	22	6	6
1984	31	53	16	22
1985	65	118	30	52
1986	137	255	63	115
1987	245	500	106	221
1988	325	825	135	356
1989	391	1216	202	558
1990	419	1635	269	827
1991	450	2085	294	1121
1992	510	2595	412	1533
1993	481	3076	427	1960
1994	494	3570	444	2404
1995	533	4103	439	2843
1996	459	4562	327	3170
1997	337	4899	184	3354
1998	238	5137	136	3490
1999	234	5371	137	3627
2000	249	5620	132	3759
2001	260	5883	128	3887
2002	299	6182	124	4011
2003	294	6476	142	4153
2004	281	6757	143	4296
2005	337	7094	140	4436
2006	279	7373	119	4555
2007	276	7649	144	4699
2008	242	7891	139	4838
2009	168	8059	109	4947

(Sources: deaths among HIV patients: < 2002: Statistics Netherlands, CBS, ≥ 2002: data from the Stichting HIV Monitoring.
Sources AIDS cases: < 1999: Health Inspectorate, ≥ 1999: Stichting HIV Monitoring, 2009 incomplete)

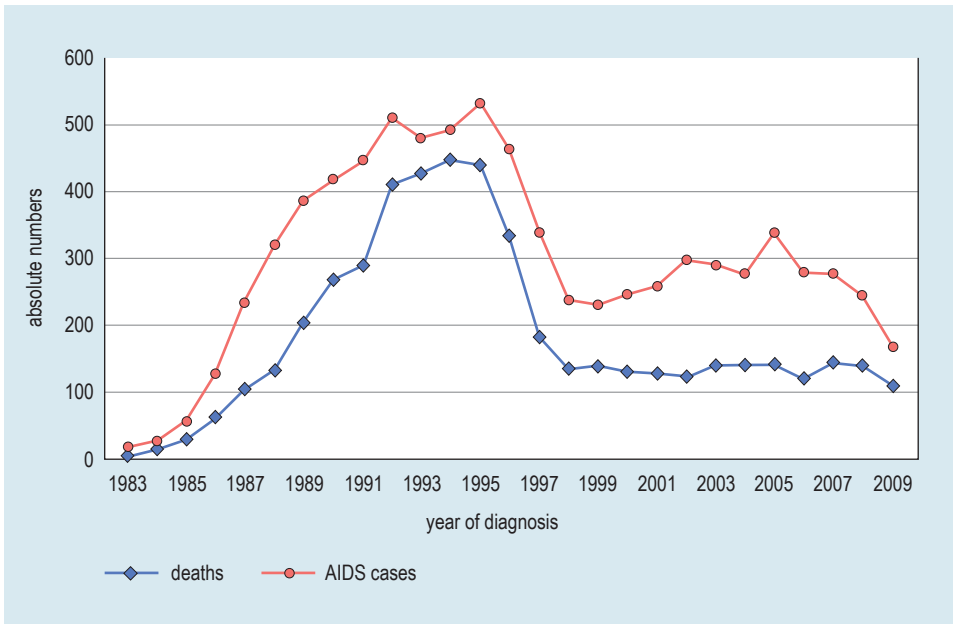


Figure 6.8: Number of AIDS cases and deaths among HIV patients, 1983–2009

(Sources: AIDS cases: < 1999: AIDS registration Health Inspectorate, ≥ 1999: Stichting HIV Monitoring. Sources for deaths: < 2002: CBS, ≥ 2002: Stichting HIV Monitoring, 2009 incomplete)

Table 6.11 Number of AIDS patients by year of AIDS diagnosis and transmission risk group, ≤1987–2009

Year of diagnosis	MSM	Heterosexual contact	Injecting drug use	Blood (contacts)	Mother to child	Other/unknown	Total
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	N
≤ 1987	424 (84.8)	26 (5.2)	28 (5.6)	18 (3.6)	3 (0.6)	1 (0.2)	500
1988	250 (76.9)	18 (5.5)	39 (12.0)	13 (4.0)	2 (0.6)	3 (0.9)	325
1989	305 (78.0)	33 (8.4)	36 (9.2)	11 (2.8)	1 (0.3)	5 (1.3)	391
1990	318 (75.9)	34 (8.1)	42 (10.0)	17 (4.1)	3 (0.7)	5 (1.2)	419
1991	335 (74.4)	46 (10.2)	43 (9.6)	19 (4.2)	2 (0.4)	5 (1.1)	450
1992	376 (73.7)	51 (10.0)	60 (11.8)	12 (2.4)	2 (0.4)	9 (1.8)	510
1993	317 (65.9)	80 (16.6)	61 (12.7)	8 (1.7)	3 (0.6)	12 (2.5)	481
1994	314 (63.6)	94 (19.0)	65 (13.2)	14 (2.8)	2 (0.4)	5 (1.0)	494
1995	314 (58.9)	116 (21.8)	74 (13.9)	7 (1.3)	9 (1.7)	13 (2.4)	533
1996	299 (65.1)	95 (20.7)	50 (10.9)	5 (1.1)	2 (0.4)	8 (1.7)	459
1997	174 (51.6)	104 (30.9)	43 (12.8)	3 (0.9)	2 (0.6)	11 (3.3)	337
1998	116 (48.7)	78 (32.8)	27 (11.3)	1 (0.4)	3 (1.3)	13 (5.5)	238
1999	120 (51.3)	75 (32.1)	12 (5.1)	3 (1.3)	6 (2.6)	18 (7.7)	234
2000	101 (40.6)	104 (41.8)	16 (6.4)	4 (1.6)	4 (1.6)	20 (8.0)	249
2001	104 (39.5)	107 (40.7)	11 (4.2)	6 (2.3)	6 (2.3)	29 (11.0)	263
2002	113 (37.8)	137 (45.8)	9 (3.0)	6 (2.0)	2 (0.7)	32 (10.7)	299
2003	119 (40.5)	112 (38.1)	14 (4.8)	7 (2.4)	6 (2.0)	36 (12.2)	294
2004	114 (40.6)	109 (38.8)	10 (3.6)	3 (1.1)	3 (1.1)	42 (14.9)	281

Table 6.11 (continued)

Year of diagnosis	MSM	Heterosexual contact	Injecting drug use	Blood (contacts)	Mother to child	Other/ unknown	Total
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	N
2005	144 (42.7)	134 (39.8)	18 (5.3)	4 (1.2)	2 (0.6)	35 (10.4)	337
2006	118 (42.3)	110 (39.4)	11 (3.9)	4 (1.4)	0 (0.0)	36 (12.9)	279
2007	129 (46.7)	103 (37.3)	12 (4.3)	3 (1.1)	1 (0.4)	28 (10.1)	276
2008	120 (49.6)	87 (36.0)	6 (2.5)	6 (2.5)	0 (0.0)	23 (9.5)	242
2009	83 (49.4)	64 (38.1)	6 (3.6)	1 (0.6)	0 (0.0)	14 (8.3)	168
Total	4807 (59.6)	1917 (23.8)	693 (8.6)	175 (2.2)	64 (0.8)	403 (5.0)	8059

(Sources: < 1999: Health Inspectorate, 1999–2009: Stichting HIV Monitoring)

Table 6.12: Number of deaths among HIV/AIDS patients by year of death and transmission risk group, 2002–2009

Year of death	MSM	Heterosexual contact	Injecting drug use	Blood (products)*	Other/ unknown
	n (%)	n (%)	n (%)	n (%)	n (%)
2002	55 (44.4)	31 (25.0)	18 (14.5)	4 (3.2)	16 (12.9)
2003	56 (39.4)	34 (23.9)	33 (23.2)	4 (2.8)	15 (10.6)
2004	80 (55.9)	37 (25.9)	15 (10.5)	1 (0.7)	10 (7.0)
2005	63 (44.7)	40 (28.4)	16 (11.3)	1 (0.7)	21 (14.9)
2006	57 (47.9)	27 (22.7)	14 (11.8)	2 (1.7)	19 (16.0)
2007	80 (55.6)	32 (22.2)	16 (11.1)	3 (2.1)	13 (9.0)
2008	69 (49.6)	38 (27.3)	22 (15.8)	1 (0.7)	9 (6.5)
2009	59 (54.1)	24 (22.0)	12 (11.0)	3 (2.8)	11 (10.1)

Footnote: mother to child transmission did not lead to death.

* Including needle stick injury.

(Source: Stichting HIV Monitoring)

6.4 Other sources

6.4.1 Screening pregnant women

Table 6.13: HIV prevalence estimates in pregnant women, based on test results of antenatal screening, 2006–2008

Year	No. of women screened	Positive result 12 weeks test	Confirmed positive test results (%)	Prevalence estimate [min, max] *
2006	185,602	342	81 (24%)	0.05 [0.04–0.08]
2007	185,791	327	90 (27%)	0.05 [0.05–0.05]
2008	189,765	289	68 (24%)	0.05 [0.04–0.07]

* Prevalence estimated under the assumption that pregnant women with a first positive test result without a confirmation test would be as often positive as those with a confirmation test; minimum prevalence: number of confirmed positive test results divided by the total number of registered pregnant women; maximum prevalence: under the assumption that all pregnant women with a first positive test result without a confirmation test would also have a positive confirmation test.

**Exclusive terminated pregnancies (induced or spontaneous): 2006 (n=1), 2007 (n=0), 2008 (n=1).

(Source: Praeventis, RIVM)

6.4.2 HIV incidence in MSM and IDU in the Amsterdam Cohort Studies

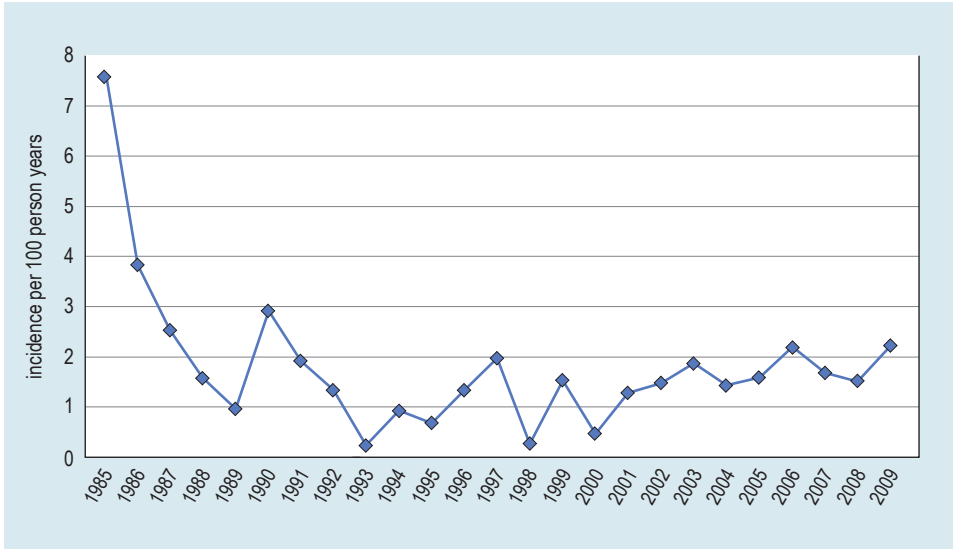


Figure 6.9: Yearly HIV incidence among MSM in Amsterdam Cohort Studies, 1985–2009

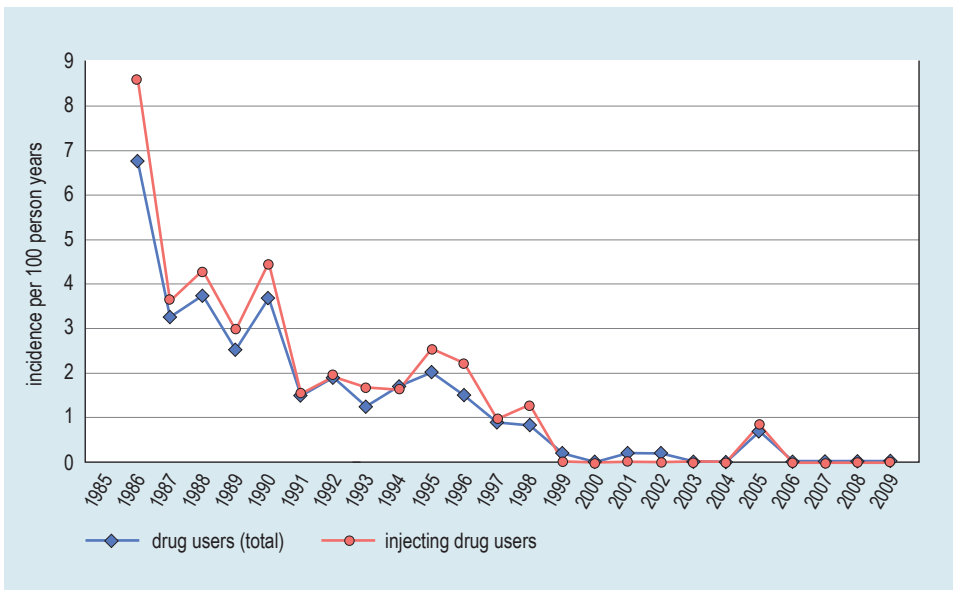


Figure 6.10: Yearly HIV incidence among IDUs (≤ 30 years at entry) in Amsterdam Cohort Studies, 1986–2009

7 Genital warts

7.1 Key points

- In 2009, 2,729 diagnoses of genital warts were reported in the national surveillance of STI centres (41% in heterosexual men, 37% in women and 22% in MSM) compared with 2,465 diagnoses in 2008 (Figure 7.1).
- In women and heterosexual men, most diagnoses were made at young age. They had a median age of 24 and 27 years, respectively. In MSM the median age was 38 years.
- The most frequently diagnosed co-infection was chlamydia, which was found in 10.3% of the cases with genital warts, similar to the overall positivity rate of chlamydia (10.5%).
- For GPs, the number of reported diagnoses of genital warts was estimated at 22,559 (95% CI 17,432–29,780) in 2008 (50% men and 50% women), an increase of 35% compared with 2007. In particular, the number of genital warts among men increased (by 53% compared with 2007) (Figure 7.2).

7.2 Characteristics, risk groups and trends



Figure 7.1: Number of new cases of genital warts by gender and sexual preference, STI centres, the Netherlands, 2004–2009

Table 7.1: Number of diagnoses of genital warts by age, gender and sexual preference, 2009

Age (years)	Heterosexual men	MSM	Women
	n (%)	n (%)	n (%)
0–14	0 (0.0)	0 (0.0)	0 (0.0)
15–19	30 (2.7)	17 (2.9)	110 (10.9)
20–24	322 (28.5)	69 (11.7)	457 (45.2)
25–29	340 (30.1)	122 (20.7)	224 (22.1)
30–34	170 (15.1)	87 (14.8)	92 (9.1)
35–39	96 (8.5)	87 (14.8)	50 (4.9)
40–44	66 (5.8)	75 (12.8)	40 (4.0)
45–49	42 (3.7)	55 (9.4)	24 (2.4)
50–54	31 (2.7)	35 (6.0)	9 (0.9)
≥ 55	31 (2.7)	41 (7.0)	6 (0.6)
Unknown	1 (0.1)	0 (0.0)	0 (0.0)
Total	1129	588	1012

Table 7.2: Number of diagnoses of genital warts by ethnicity, gender and sexual preference, 2009

Ethnicity	Heterosexual men	MSM	Women
	n (%)	n (%)	n (%)
The Netherlands	959 (84.9)	479 (81.5)	910 (89.9)
Turkey	13 (1.2)	4 (0.7)	2 (0.2)
North Africa/Morocco	29 (2.6)	0 (0.0)	6 (0.6)
Surinam	36 (3.2)	9 (1.5)	14 (1.4)
Netherlands Antilles/Aruba	10 (0.9)	7 (1.2)	6 (0.6)
Sub-Saharan Africa	11 (1.0)	1 (0.2)	4 (0.4)
Eastern Europe	5 (0.4)	6 (1.0)	18 (1.8)
Latin America	7 (0.6)	18 (3.1)	6 (0.6)
Asia	14 (1.2)	16 (2.7)	11 (1.1)
Europe other	17 (1.5)	8 (1.4)	20 (2.0)
Else	25 (2.2)	38 (6.5)	14 (1.4)
Unknown	3 (0.3)	2 (0.3)	1 (0.1)
Total	1129	588	1012

Table 7.3: Number of diagnoses of genital warts by sexual behavioural characteristics, gender and sexual preference, 2009

	Heterosexual men	MSM	Women
	n (%)	n (%)	n (%)
Number of partners in past 6 months			
0 partners	21 (1.9)	2 (0.3)	28 (2.8)
1 partner	406 (36.0)	70 (11.9)	416 (41.1)
2 partners	223 (19.8)	64 (10.9)	250 (24.7)
3 or more partners	441 (39.1)	412 (70.1)	247 (24.4)
Unknown	38 (3.4)	40 (6.8)	71 (7.0)
Condom use at last sexual contact*			
No	382 (71.7)	81 (51.3)	360 (71.9)
Yes	140 (26.3)	73 (46.2)	121 (24.2)
Unknown	11 (2.1)	4 (2.5)	20 (4.0)
Previous GO/CT/syphilis in anamnesis			
No	955 (84.6)	440 (74.8)	836 (82.6)
Yes	96 (8.5)	122 (20.7)	110 (10.9)
Don't know	65 (5.8)	22 (3.7)	58 (5.7)
Unknown	13 (1.2)	4 (0.7)	8 (0.8)
Previous HIV test			
No	533 (47.2)	74 (12.6)	428 (42.3)
Yes, positive	2 (0.2)	114 (19.4)	1 (0.1)
Yes, negative	578 (51.2)	392 (66.7)	568 (56.1)
Yes, result unknown	2 (0.2)	5 (0.9)	5 (0.5)
Unknown	14 (1.2)	3 (0.5)	10 (1.0)
CSW, women			
No			956 (94.5)
Yes, in past 6 months			54 (5.3)
Unknown			2 (0.2)
Client of CSW, men			
No	1018 (90.2)	574 (97.6)	
Yes, in past 6 months	105 (9.3)	14 (2.4)	
Unknown	6 (0.5)	0 (0.0)	
Swinger*			
No	525 (94.8)	158 (89.3)	481 (94.5)
Yes	26 (4.7)	18 (10.2)	24 (4.7)
Unknown	3 (0.5)	1 (0.6)	4 (0.8)

* Voluntary question, condom use answered by 44% (n=1,192) and swinger by 45% (n=1,240) of persons with genital warts.

Table 7.4: Concurrent STI by gender and sexual preference among persons diagnosed with genital warts, 2009

Concurrent infection	Heterosexual men	MSM	Women
	(N=1129) n (%)	(N=588) n (%)	(N=1012) n (%)
Gonorrhoea	12 (1.1)	72 (12.2)	13 (1.3)
Chlamydia	90 (8.0)	74 (12.6)	117 (11.6)
Infectious syphilis	1 (0.1)	24 (4.1)	0 (0.0)
HIV newly diagnosed	3 (0.3)	15 (2.6)	0 (0.0)
Genital herpes	5 (0.4)	5 (0.9)	8 (0.8)
Hepatitis B, infectious	0 (0.0)	2 (0.3)	2 (0.2)

7.3 General practitioner network

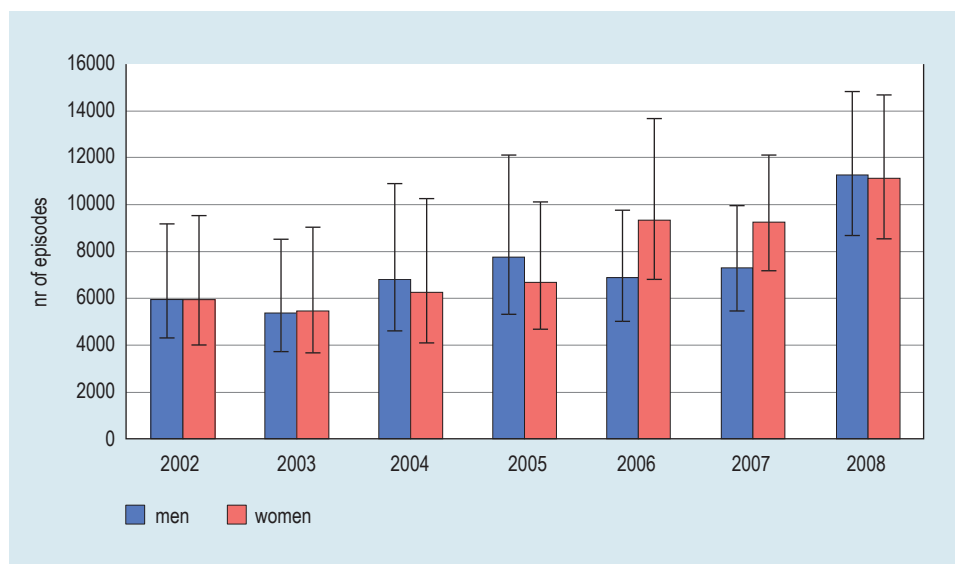


Figure 7.2: Estimated number (and 95% CI) of episodes of genital warts at GPs by gender, based on extrapolation from 80 practices in the surveillance network of GPs in the Netherlands, 2002-2008 (Source: LINH)

Table 7.5: Reporting rate (number of episodes per 100,000 population) of genital warts at GPs in the Netherlands by gender, 2002-2008

Year	Men		Women		Total	
	n/100,000	95% CI	n/100,000	95% CI	n/100,000	95% CI
2002	75.3	(54.1–116.2)	73.8	(50.0–118.4)	74.5	(52.1–117.3)
2003	67.4	(47.0–107.7)	67.0	(45.5–111.8)	67.2	(46.3–109.7)
2004	85.2	(57.2–136.7)	77.0	(50.3–125.9)	81.1	(53.7–131.3)
2005	97.2	(66.5–151.6)	81.6	(56.8–124.1)	89.4	(61.7–137.8)
2006	85.9	(62.8–121.8)	114.4	(83.6–167.7)	100.2	(73.2–144.7)
2007	91.3	(68.3–124.7)	113.1	(87.2–148.2)	102.2	(77.8–136.4)
2008	139.7	(108.3–184.5)	135.3	(104.3–178.6)	137.5	(106.3–181.5)

CI = confidence interval. (Source: LINH)

8 Genital herpes

8.1 Key points

- In 2009, 651 diagnoses of genital herpes were made in the national surveillance of STI centres (35% in heterosexual men, 20% in MSM, 45% in women) compared with 722 diagnoses in 2008. (Figure 8.1)
- In women, most diagnoses were made in those younger than 25 years (52%), for heterosexual men a slightly higher age range was seen (51% younger than 29 years). MSM were found positive at a higher age, median age of 38 years.
- For GPs, the number of reported diagnoses of genital herpes was estimated at 14,574 (95% CI 10,974–19,570) in 2008 (31% men and 69% women), an increase of 38% compared with 2007. In particular, the number of genital herpes among men increased (by 56% compared with 2007) (Figure 8.2).

8.2 Characteristics, risk groups and trends



Figure 8.1: Number of new diagnoses of genital herpes infections by gender and sexual preference, STI centres, the Netherlands, 2004–2009

Table 8.1: Number of diagnoses of genital herpes by age, gender and sexual preference, 2009

Age (years)	Heterosexual men	MSM	Women
	n (%)	n (%)	n (%)
0–14	0 (0.0)	0 (0.0)	0 (0.0)
15–19	5 (2.2)	2 (1.5)	32 (11.0)
20–24	58 (25.3)	16 (12.3)	121 (41.4)
25–29	53 (23.1)	9 (6.9)	54 (18.5)
30–34	37 (16.2)	25 (19.2)	29 (9.9)
35–39	21 (9.2)	19 (14.6)	24 (8.2)
40–44	21 (9.2)	24 (18.5)	14 (4.8)
45–49	18 (7.9)	20 (15.4)	9 (3.1)
50–54	5 (2.2)	5 (3.8)	6 (2.1)
≥ 55	11 (4.8)	10 (7.7)	3 (1.0)
Unknown	0 (0.0)	0 (0.0)	0 (0.0)
Total	229	130	292

Table 8.2: Number of diagnoses of genital herpes by ethnicity, gender and sexual preference, 2009

Ethnicity	Heterosexual men	MSM	Women
	n (%)	n (%)	n (%)
The Netherlands	167 (72.9)	93 (71.5)	252 (86.3)
Turkey	2 (0.9)	1 (0.8)	0 (0.0)
North Africa/Morocco	3 (1.3)	0 (0.0)	2 (0.7)
Surinam	23 (10.0)	2 (1.5)	20 (6.8)
Netherlands Antilles/Aruba	12 (5.2)	4 (3.1)	1 (0.3)
Sub-Saharan Africa	3 (1.3)	4 (3.1)	0 (0.0)
Eastern Europe	3 (1.3)	4 (3.1)	3 (1.0)
Latin America	1 (0.4)	7 (5.4)	4 (1.4)
Asia	1 (0.4)	7 (5.4)	3 (1.0)
Europe other	4 (1.7)	0 (0.0)	2 (0.7)
Else	10 (4.4)	8 (6.2)	5 (1.7)
Unknown	0 (0.0)	0 (0.0)	0 (0.0)
Total	229	130	292

Table 8.3: Number of diagnoses of genital herpes by sexual behavioural characteristics, gender and sexual preference, 2009

	Heterosexual men	MSM	Women
	n (%)	n (%)	n (%)
Number of partners in past 6 months			
0 partners	1 (0.4)	1 (0.8)	4 (1.4)
1 partner	77 (33.6)	11 (8.5)	132 (45.2)
2 partners	68 (29.7)	20 (15.4)	69 (23.6)
3 or more partners	79 (34.5)	90 (69.2)	78 (26.7)
Unknown	4 (1.7)	8 (6.2)	9 (3.1)
Condom use at last sexual contact*			
No	60 (76.9)	18 (62.1)	85 (75.2)
Yes	17 (21.8)	10 (34.5)	25 (22.1)
Unknown	1 (1.3)	1 (3.4)	3 (2.7)
Previous GO/CT/syphilis in anamnesis			
No	193 (84.3)	83 (63.8)	250 (85.6)
Yes	28 (12.2)	43 (33.1)	35 (12.0)
Don't know	5 (2.2)	3 (2.3)	6 (2.1)
Unknown	3 (1.3)	1 (0.8)	1 (0.3)
Previous HIV test			
No	82 (35.8)	12 (9.2)	108 (37.0)
Yes, positive	1 (0.4)	50 (38.5)	2 (0.7)
Yes, negative	137 (59.8)	66 (50.8)	182 (62.3)
Yes, result unknown	1 (0.4)	1 (0.8)	0 (0.0)
Unknown	8 (3.5)	1 (0.8)	0 (0.0)
CSW, women			
No			277 (94.9)
Yes, in past 6 months			15 (5.1)
Unknown			0 (0.0)
Client of CSW, men			
No	210 (91.7)	128 (98.5)	
Yes, in past 6 months	18 (7.9)	2 (1.5)	
Unknown	1 (0.4)	0 (0.0)	
Swinger*			
No	77 (98.7)	27 (93.1)	110 (91.7)
Yes	1 (1.3)	2 (6.9)	10 (8.3)
Unknown	0 (0.0)	0 (0.0)	0 (0.0)

* Voluntary question, condom use answered by 34% (n=220) and swinger by 35% (n=227) of persons with genital herpes.

Table 8.4: Concurrent STI by gender and sexual preference among persons diagnosed with genital herpes, 2009

Concurrent infection	Heterosexual men	MSM	Women
	(N=229) n (%)	(N=130) n (%)	(N=292) n (%)
Gonorrhoea	3 (1.3)	11 (8.5)	5 (1.7)
Chlamydia	23 (10.0)	12 (9.2)	23 (7.9)
Infectious syphilis	0 (0.0)	4 (3.1)	2 (0.7)
HIV newly diagnosed	1 (0.4)	6 (4.6)	0 (0.0)
Genital warts	5 (2.2)	5 (3.8)	8 (2.7)
Hepatitis B, infectious	0 (0.0)	2 (1.5)	0 (0.0)

8.3 General practitioner network

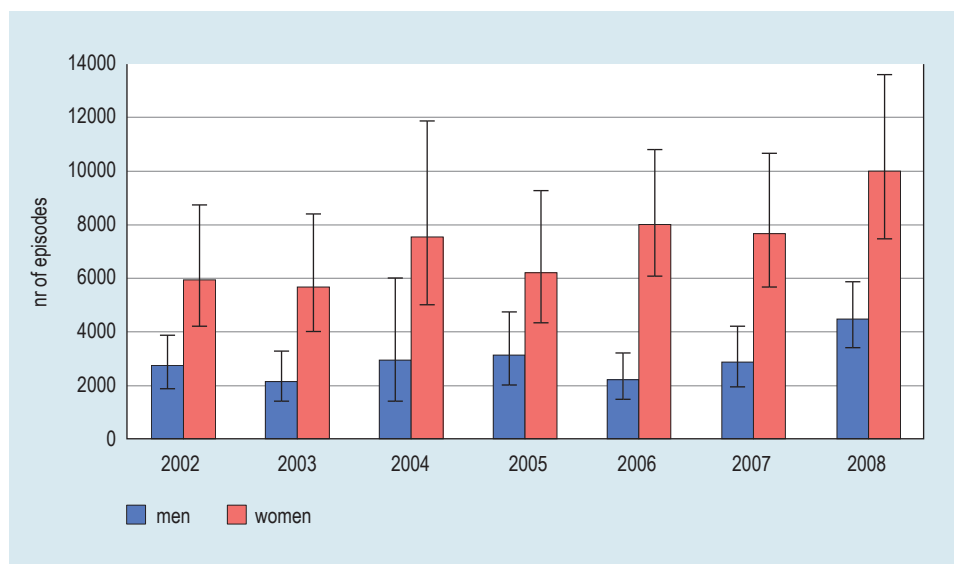


Figure 8.2: Estimated number (and 95% CI) of episodes of genital herpes at GPs by gender, based on extrapolation from 80 practices in the surveillance network of GPs in the Netherlands, 2002-2008 (Source: LINH)

Table 8.5: Reporting rate (number of episodes per 100,000 population) of genital herpes at GPs in the Netherlands by gender, 2002-2008

Year	Men		Women		Total	
	n/100,000	95% CI	n/100,000	95% CI	n/100,000	95% CI
2002	34.2	(23.8–49.2)	73.8	(52.4–108.3)	54.0	(38.1–78.8)
2003	26.9	(17.5–41.4)	69.7	(49.7–103.6)	48.3	(33.6–72.5)
2004	36.6	(17.9–74.9)	92.3	(61.4–146.3)	64.5	(39.6–110.6)
2005	38.8	(25.4–59.2)	75.9	(53.0–113.5)	57.4	(39.2–86.3)
2006	27.2	(18.6–39.9)	98.1	(74.5–132.4)	62.7	(46.5–86.2)
2007	35.9	(24.4–52.8)	93.7	(68.9–130.4)	64.8	(46.7–91.6)
2008	55.8	(42.5–73.4)	121.8	(91.3–165.2)	88.8	(66.9–119.3)

CI = confidence interval. (Source: LINH)

9 Hepatitis B

9.1 Key points

- In 2009, the incidence of notified cases of acute hepatitis B was 1.2 per 100,000 inhabitants and was higher in men (1.9) than in women (0.5). In 2008, 1.3 per 100,000 inhabitants were notified with acute hepatitis B. (Figure 9.2)
- Unprotected sexual contact remained the most important risk factor for acute hepatitis B.
- The number of acute hepatitis B notifications decreased by 10% compared with 2008.
- In the STI centres, 210 diagnoses of infectious hepatitis B were made.
- Data from the screening of pregnant women showed an estimated prevalence of hepatitis B of 0.33% in 2008 compared with 0.34% in 2007 and 0.4% in 2006.

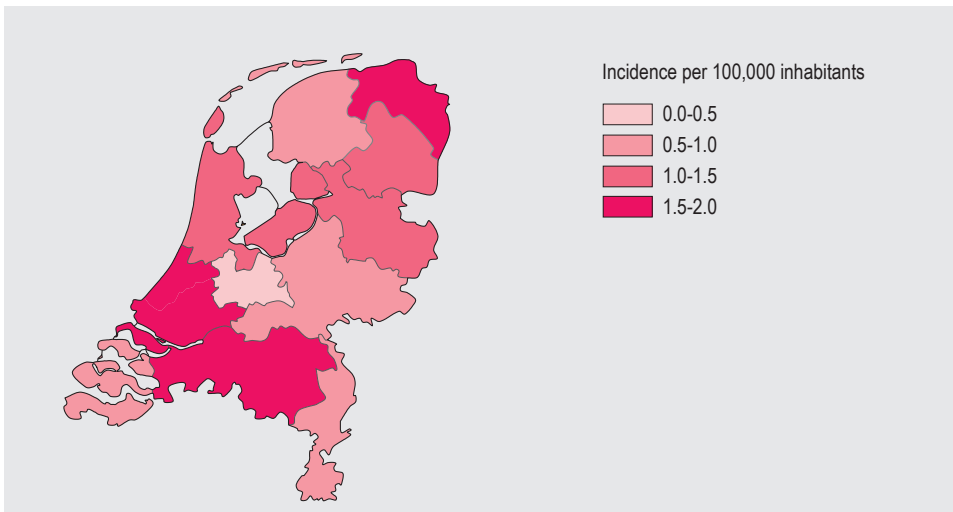


Figure 9.1: Incidence of acute hepatitis B per 100,000 inhabitants by region, the Netherlands, 2009
(Source: RIVM-OSIRIS, notification data)

9.2 Notification data: characteristics, risk groups and trends

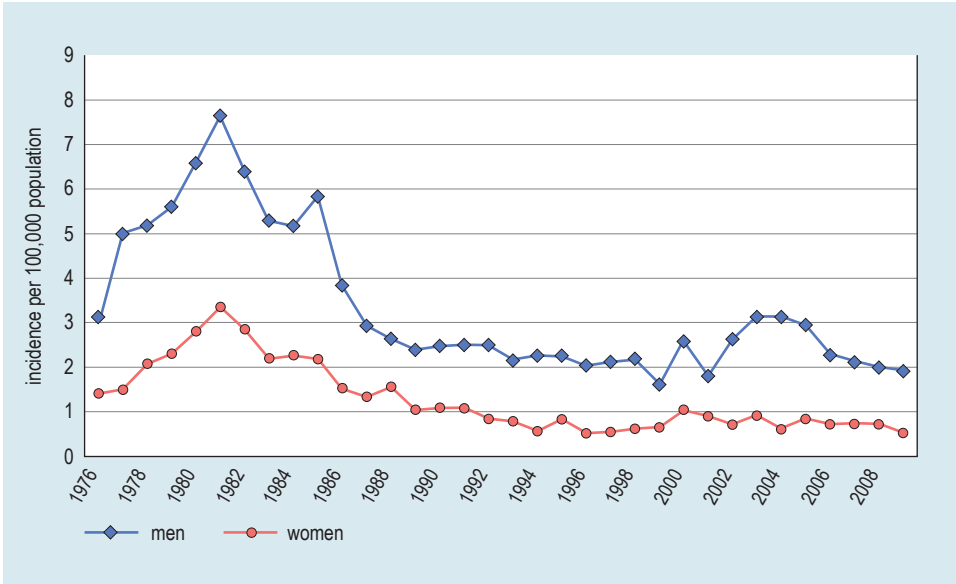


Figure 9.2: Incidence of acute hepatitis B by gender, 1976–2009
(Source: RIVM-OSIRIS, notification data)

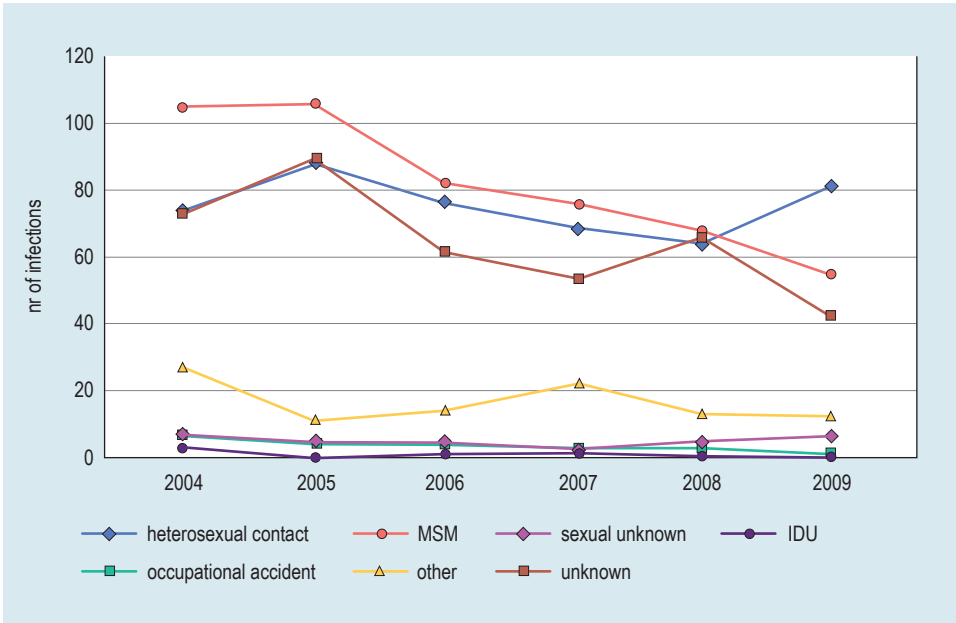


Figure 9.3: Number of infections of acute hepatitis B by route of transmission, 2004–2009
(Source: RIVM-OSIRIS, notification data)

Table 9.1: Proportion of acute hepatitis B cases by most common route of transmission, the Netherlands, 2009

	Heterosexual contact	MSM	Other
	(N=81) n (%) [*]	(N=55) n (%) [*]	(N=62) n (%) [*]
Infected abroad	19 (23.5)	7 (12.7)	16 (25.8)
Born abroad	17 (21.0)	5 (9.1)	14 (22.6)
Infected by casual partner	47 (58.0)	42 (76.4)	–
Median age (+ range)	37 (18–63)	42 (20–76)	40.5 (16–72)

^{*} Proportions per category can overlap, so percentages do not add up to 100%.

(Source: RIVM-OSIRIS, notification data)

9.3 Infectious hepatitis B in the STI centres

Table 9.2: Number of diagnoses of infectious hepatitis B by age, gender and sexual preference, 2009

Age (years)	Heterosexual men	MSM	Women
	n (%)	n (%)	n (%)
0–14	0 (0.0)	0 (0.0)	0 (0.0)
15–19	4 (4.5)	1 (1.8)	5 (7.8)
20–24	16 (18.0)	7 (12.3)	21 (17.2)
25–29	23 (25.8)	10 (17.5)	13 (20.3)
30–34	12 (13.5)	10 (17.5)	11 (17.2)
35–39	15 (16.9)	8 (14.0)	3 (4.7)
40–44	12 (13.5)	4 (7.0)	6 (9.4)
45–49	4 (4.5)	8 (14.0)	3 (4.7)
50–54	1 (1.1)	3 (5.3)	2 (3.1)
≥ 55	2 (2.3)	6 (10.5)	0 (0.0)
Total	89	57	64

Table 9.3: Number of diagnoses of infectious hepatitis B by ethnicity, gender and sexual preference, 2009

Ethnicity	Heterosexual men	MSM	Women
	n (%)	n (%)	n (%)
The Netherlands	25 (28.1)	23 (40.4)	6 (9.4)
Turkey	4 (4.5)	0 (0.0)	0 (0.0)
North Africa/Morocco	1 (1.2)	0 (0.0)	1 (1.6)
Surinam	5 (5.6)	0 (0.0)	4 (6.3)
Netherlands Antilles/Aruba	0 (0.0)	1 (1.8)	0 (0.0)
Sub-Saharan Africa	32 (36.0)	3 (5.3)	19 (29.7)
Eastern Europe	11 (12.4)	16 (28.1)	16 (25.0)
Latin America	2 (2.3)	2 (3.5)	3 (4.7)
Asia	3 (3.4)	4 (7.0)	7 (10.9)
Europe other	1 (1.1)	0 (0.0)	4 (6.3)
Else	5 (5.6)	8 (14.0)	4 (6.3)
Unknown	0 (0.0)	0 (0.0)	0 (0.0)
Total	89	57	64

Table 9.4: Number of diagnoses of infectious hepatitis B by sexual behavioural characteristics, gender and sexual preference, 2009

	Heterosexual men	MSM	Women
	n (%)	n (%)	n (%)
Number of partners in past 6 months			
0 partners	6 (6.7)	1 (1.8)	2 (3.1)
1 partner	37 (41.6)	6 (10.5)	27 (42.2)
2 partners	22 (24.7)	5 (8.8)	10 (15.6)
3 or more partners	20 (22.5)	38 (66.7)	10 (15.6)
Unknown	4 (4.5)	7 (12.3)	15 (23.4)
Condom use at last sexual contact*			
No	26 (72.2)	8 (50.0)	14 (60.9)
Yes	9 (25.0)	8 (50.0)	6 (26.1)
Unknown	1 (2.8)	0 (0.0)	3 (13.0)
Previous GO/CT/syphilis in anamnesis			
No	81 (91.0)	44 (77.2)	58 (90.6)
Yes	6 (6.7)	12 (21.1)	4 (6.3)
Don't know	1 (1.1)	0 (0.0)	2 (3.1)
Unknown	1 (1.1)	1 (1.8)	0 (0.0)
Previous HIV test			
No	48 (53.9)	11 (19.3)	35 (54.7)
Yes, positive	0 (0.0)	15 (26.3)	0 (0.0)
Yes, negative	40 (44.9)	28 (49.1)	27 (42.2)
Yes, result unknown	0 (0.0)	2 (3.5)	1 (1.6)
Unknown	1 (1.1)	1 (1.8)	1 (1.6)
CSW, women			
No			47 (73.4)
Yes, in past 6 months			16 (25.0)
Unknown			1 (1.6)
Client of CSW, men			
No	84 (94.4)	56 (98.3)	
Yes, in past 6 months	5 (5.6)	0 (0.0)	
Unknown	0 (0.0)	1 (1.8)	
Swinger*			
No	40 (100.0)	16 (94.1)	27 (96.4)
Yes	0 (0.0)	0 (0.0)	1 (3.6)
Unknown	0 (0.0)	1 (5.9)	0 (0.0)

* Voluntary question, condom use answered by 36% (n=75) and swinger by 41% (n=85) of persons diagnosed with hepatitis B.

Table 9.5: Concurrent STI by gender and sexual preference among persons diagnosed with hepatitis B, 2009

Concurrent infection	Heterosexual men (N=89) n (%)	MSM (N=57) n (%)	Women (N=64) n (%)
Gonorrhoea	4 (4.5)	4 (7.0)	1 (1.6)
Chlamydia	10 (11.2)	11 (19.3)	5 (7.8)
Infectious syphilis	1 (1.1)	2 (3.5)	0 (0.0)
HIV newly diagnosed	1 (1.1)	4 (7.0)	0 (0.0)
Genital warts	0 (0.0)	2 (3.5)	2 (3.1)
Genital herpes	0 (0.0)	2 (3.5)	0 (0.0)

9.4 Screening pregnant women

Table 9.6: Hepatitis B prevalence estimates for pregnant women, based on test results of antenatal screening, 2006–2008

Year	No. of women screened	Positive result 12 weeks test	Confirmed positive test results (%)	Prevalence estimate [min, max] *
2006	185,941	966	714 (74%)	0.4 [0.38–0.4]
2007	186,137	868	620 (71%)	0.34 [0.33–0.34]
2008	190,140	932	605 (65%)	0.33 [0.32–0.33]

* Prevalence estimated under the assumption that pregnant women with a first positive test result without a confirmation test would be as often positive as those with a confirmation test; minimum prevalence: number of confirmed positive test results divided by the total number of registered pregnant women; maximum prevalence: under the assumption that all pregnant women with a first positive test result without a confirmation test would also have a positive confirmation test.

** Exclusive terminated pregnancies (induced or spontaneous): 2006 (n=22), 2007 (n=22), 2008 (n=15).

(Source: Praeventis, RIVM)

10 Hepatitis C

10.1 Key points

- In 2009, the total number of acute HCV notifications (n=47) remained stable compared with 2008 (n=48). The number of infections in MSM decreased by 29%, from 34 notifications in 2008 to 24 notifications in 2009.
- Unprotected sexual contact remained the most important route of transmission for acute hepatitis C (56%), especially sexual contact between men (89%).

10.2 Notification data: characteristics, risk groups and trends

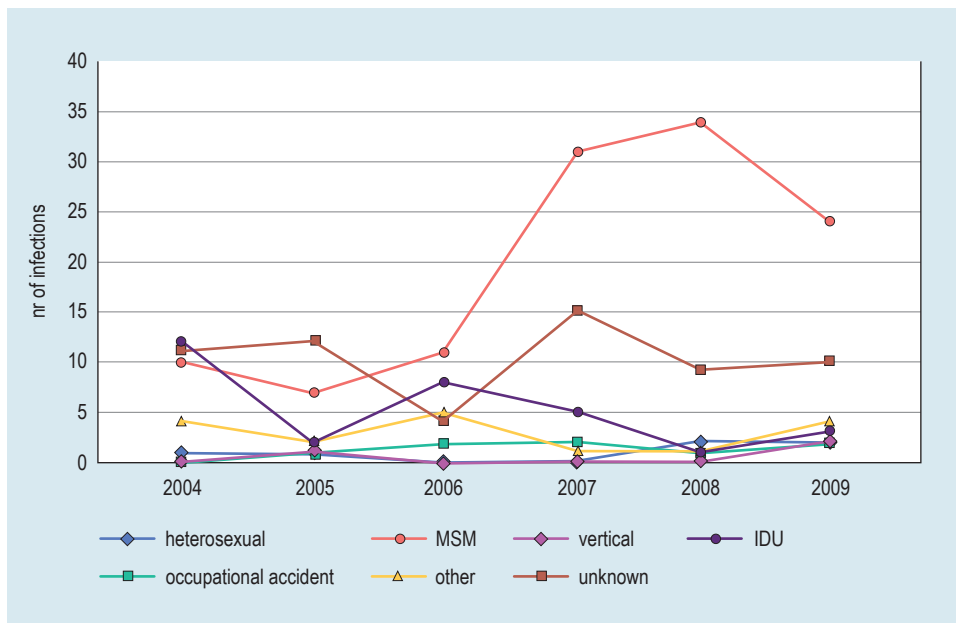


Figure 10.1: Number of infections of acute HCV infections by route of transmission, 2004–2009
(Source: RIVM-OSIRIS, notification data)

11 General conclusions and recommendations

The national network of STI centres provides STI care for high-risk groups and collects data on STI trends and determinants. This forms the basis of the national STI surveillance. Where possible, data sources obtained through regular care and specific studies complement surveillance. In 2009, European wide surveillance was boosted by the initiation of standardised STI surveillance and STI alerts by ECDC.

The absolute number of new consultations seen in the STI centres, as well as the number of STI consultations at general practitioners (GPs), has increased steadily over the last decade. Over the past year, in particular the increase of STI consultations at GPs was noticeable. Overall, this indicates a successful cooperation between regular and additional STI services to reach those at risk and increase STI control. While providing services for an ever larger number of people, positivity rates in STI centres and at GPs have remained remarkably stable. This is in line with a consistent successful targeting of those most at risk of being infected with transmissible STIs.

Chlamydia remains by far the most commonly diagnosed STI, both in the STI centres and at GPs. In line with last years recommendation and to support the ongoing control effort, the VU Medical Centre accepted to provide reference services from 2010 onwards to observe the occurrence of variant strains and monitor the response to treatment. The burden of chlamydia among young heterosexuals (<25 years) remains high, illustrating that (novel) effective interventions to reduce the burden in this group are urgently needed. The Sense website and Sense consultations were developed, in close cooperation with Soa Aids Netherlands and the Municipal Health Services, to support young people to implement a healthier sexual lifestyle to reduce their STI risk. Further synergy of STI prevention and cure may result in more effective control. Another option currently being explored is the additive effect of systematic chlamydia screening to reduce the short- and long-term health impact of the persistently high transmission of chlamydia.

Transmission between men having sex with men (MSM) once again accounted for the highest positivity ratios of new STI and HIV infections in 2009; MSM remained the group most at risk for STI. High numbers of concurrent STI diagnosed in this group indicate that unsafe sex practices remained common among (HIV positive) MSM. Nevertheless, over the past years, most positivity ratios have shown a gradual decline, which could suggest a gradual reduction of risk behaviour. In 2009 however, while ratios for chlamydia, syphilis and HIV declined further, the positivity ratio for gonorrhoea increased significantly. This increase could be partly related to revised testing policies or more sensitive testing methods (use of NAAT instead of culture). However, ongoing transmission of gonorrhoea among high-risk networks is a major threat to future control. This threat is even further corroborated by the ongoing acquisition of antimicrobial resistance of gonorrhoea.

Of particular concern is the persistent high positivity ratio of STI among HIV positive MSM. While this group is systematically under review in regular care by HIV treatment centres, routine STI screening and prevention is still not part of routine care for HIV

positives. Effective commitment of HIV treatment specialists to address these infection risks is essential to improve care for individual patients and reduce public health risks. STI centres aim at high-quality specialised STI care with easy access for high-risk groups. Specific quality indicators have been defined by a multidisciplinary taskforce and following consultations with several stakeholders. These indicators have been endorsed by the CIB to act as a quality control framework. In 2009, visitations to STI centres were started to enable monitoring and evaluation of the quality of care. In 2010 a first evaluation of the visitations is envisaged, possibly leading to modification of the quality indicators. With further integration of preventive and curative care by STI centres, a common triage and quality system will strengthen this further.

Recommendations

- Strengthen integrated surveillance of data from STI centres with Sense data and with STI data from other sources, such as antenatal data, data from HIV treatment centres and GP surveillance networks.
- Develop and implement systematic surveillance of indicators of effective partner notification.
- Improve understanding of the impact of STI/HIV co-infections and STI infections at multiple locations on transmission, diagnosis and treatment.
- Explore the potential to reach those at risk for STI via the internet by offering tailored prevention linked to client-driven STI screening.
- Strengthening molecular typing for gonorrhoea to identify molecular markers of resistance, to facilitate selecting appropriate treatment.

Appendix A. National surveillance of STI centres

Coordinating STI centres

GGD Amsterdam:	J.S.A.Fennema
GGD Den Haag:	P. van Leeuwen
GGD Groningen:	F. de Groot
GGD Hart voor Brabant:	J.C.A.M. van de Sande
	H. van Kruchten
GGD Nijmegen:	A. van Daal
	H. Bos
GGD Rotterdam:	E. van der Veen
	O. de Zwart
	H. Götz
GGD Utrecht:	M. Langevoort
	V. Sigurdsson
GGD Zuid Limburg:	C.J.P.A. Hoebe
	E.J.W.M. Niekamp

Regional STI centres

Erasmus MC:	W. van der Meijden
GGD Brabant Zuid-Oost	P. Tolsma
GGD Drenthe:	G. Reitsema
GGD Eemland:	R. Heman
GGD Flevoland:	H. Fortuin
GGD Fryslan:	A. Strikwerda
GGD Gelre-IJssel:	H. Bos
GGD Gooi en Vechtstreek:	R. Stumpel
GGD Hollands-Midden (Gouda):	K. Visser
GGD Hollands-Midden (Leiden):	B. Rump
GGD Hollands Noorden	I. Bargmann
GGD Kennemerland:	E. den Heijer
GGD Noord en Midden Limburg:	C. Niesen
GGD Regio Twente:	I. Schreurs
GGD Rivierenland:	P. Cornelissen
GGD West-Brabant:	H. Driessen
GGD IJssel-Vecht:	H. Bruins
GGD Zaanstreek-Waterland:	P. Degenaar
GGD Zeeland:	F. Jacobs
GGD Zuid-Holland Zuid:	H. van den Kerkhof
GGD Zuid-Hollandse Eilanden:	A. van Heukelum
Hulpverlening Gelderland Midden:	M. Pelgrim

Laboratories

Academisch Ziekenhuis Maastricht:	E. Stobberingh
Albert Schweitzer Ziekenhuis Dordrecht:	I. Frenay
Alysis zorggroep Arnhem:	C. van Meerendonk
Amphia Ziekenhuis Breda:	P. van Keulen
Atrium Medisch Centrum Heerlen:	J.H.T. Wagenvoort
Canisius Wilhelmina Ziekenhuis Nijmegen:	T. Simons
Centraal Bacteriologisch and Serologisch laboratorium Hilversum:	C.P. Timmerman
Diagnostisch Centrum Eindhoven:	L. Harms
Erasmus MC Rotterdam:	M. Schutte
Gelre Ziekenhuizen Apeldoorn:	F.G.C. Heilman
Groene Hart Ziekenhuis Gouda:	F.C. van der Geest
Isala klinieken Zwolle:	P. van de Goor
Jeroen Bosch Ziekenhuis 's Hertogenbosch:	P. Schneeberger
Laboratoria Pathologische Anatomie and	
Medische Microbiologie Velhoven:	A. Jansz
Laboratorium Microbiologie Twente-Achterhoek Enschede:	B. Mulder
Laboratorium voor de Volksgezondheid in Friesland Leeuwarden:	J. van Zeijl
Laurentius Ziekenhuis Roermond:	F. Stals
Leiden Universitair Medisch Centrum:	A.C.M. Kroes
Medisch Centrum Haaglanden Den Haag:	C.J. Jansen
Meander Medisch Centrum Amersfoort:	H. Schreuder
Medisch Centrum Alkmaar:	J. Sloos
Ruwaard van Putten Ziekenhuis Spijkenisse:	H. van Ingen
Slingeland Ziekenhuis Doetinchem:	R. Bosboom
St. Elisabeth Ziekenhuis Tilburg:	J. Marcelis
Streeklaboratorium voor de Volksgezondheid Amsterdam:	C. Signet
Streeklaboratorium voor de Volksgezondheid Haarlem:	D. Veenendaal
Streeklaboratorium voor de Volksgezondheid Deventer:	F.W. Sebens
Streeklaboratorium voor de Volksgezondheid Groningen:	B.P. Overbeek
Streeklaboratorium voor de Volksgezondheid Zeeland:	L. Sabbe
Universitair Medisch Centrum Utrecht:	J.V. van Marken
VieCuri Venlo:	T. Trienekens
Vlietland Ziekenhuis Schiedam:	B. Moffie
Zaans Medisch Centrum Zaandam:	C. Fijen
Zeeuws-Vlaanderen, Ziekenhuis Terneuzen:	W. Westphaal

Appendix B. Stichting HIV Monitoring

Within the framework of the Stichting HIV Monitoring, a substantial number of professionals are participating:

*Treating physicians (*site coordinating physicians)*

Academisch Medisch Centrum at the University of Amsterdam, Amsterdam:

Prof. dr. J.M. Prins*, Prof. dr. T.W. Kuijpers, Dr. H.J. Scherpbier, Dr. K. Boer,
Dr. J.T.M. van der Meer, Dr. F.W.M.N. Wit, Dr. M.H. Godfried, Prof. dr. P. Reiss,
Drs. M.E. Haverkort, Prof. Dr. T. van der Poll, Dr. F.J.B. Nellen, Prof. dr. J.M.A. Lange,
Dr. S.E. Geerlings, Dr. M. van Vugt, Drs. S.M.E. Vrouwenraets, Drs. D. Pajkrt,
Drs. J.C. Bos, Drs. M. van der Valk.

Academisch Ziekenhuis Maastricht, Maastricht: Dr. G. Schreij*, Dr. S. Lowe,
Dr. A. Oude Lashof.

Catharina-ziekenhuis, Eindhoven: Drs. M.J.H. Pronk*, Dr. B. Bravenboer.

Erasmus Medisch Centrum, Dr. M.E. van der Ende*, Drs. T.E.M.S. de Vries-Sluijs,
Dr. C.A.M. Schurink, Drs. M. van der Feltz, Dr. J.L. Nouwen, Dr. L.B.S. Gelinck,
Dr. A. Verbon, Drs. B.J.A. Rijnders, Drs. E.D. van de Ven-de Ruiter, Dr. L. Slobbe.

Erasmus Medisch Centrum-Sophia, Rotterdam: Dr. N.G. Hartwig, Dr. G.J.A. Driessen.
Flevoziekenhuis, Almere: Dr. J. Branger*.

HagaZiekenhuis, Den Haag: Dr. R.H. Kauffmann*, Dr. E.F. Schippers.

Isala Klinieken, Zwolle: Dr. P.H.P. Groeneveld*, Dr. M.A. Alleman, Drs. J.W. Bouwhuis.
Kennemer Gasthuis: Prof. dr. R.W. ten Kate*, Dr. R. Soetekouw.

Leids Universitair Medisch Centrum, Leiden: Dr. F.P. Kroon*, Prof. dr. P.J. van den Broek,
Prof. dr. J.T. van Dissel, Dr. S.M. Arend, Drs. C. van Nieuwkoop, Drs. M.G.J. de Boer,
Drs. H. Jolink.

Maasstadziekenhuis, Rotterdam: Dr. J.G. den Hollander*, Dr. K. Pogany.

Medisch Centrum Alkmaar, Alkmaar: Dr. W. Bronsveld* (until November 2009),
Drs. W. Kortmann, Drs. G. van Twillert.

Medisch Centrum Haaglanden, Den Haag: Dr. R. Vriesendorp*, Dr. E.M.S. Leyten.

Medisch Spectrum Twente, Enschede: Dr. C.H.H. ten Napel*, Drs. G.J. Kootstra.

Onze Lieve Vrouwe Gasthuis, Amsterdam: Prof. dr. K. Brinkman*, Dr. W.L. Blok,
Dr. P.H.J. Frissen, Drs. W.E.M. Schouten, Drs. G.E.L. van den Berk.

Sint Elisabeth Ziekenhuis, Tilburg: Dr. J.R. Juttman*, Dr. M.E.E. van Kasteren,
Drs. A.E. Brouwer.

Sint Lucas Andreas Ziekenhuis, Amsterdam: Dr. J. Veenstra*, Dr. K.D. Lettinga.

Slotervaartziekenhuis, Amsterdam: Dr. J.W. Mulder*, Dr. E.C.M. van Gorp,
Drs. P.M. Smit, S. Weijer.

Stichting Medisch Centrum Jan van Goyen, Amsterdam: Drs. A. van Eeden*,
Dr. D.W.M. Verhagen*.

Universitair Medisch Centrum Groningen, Groningen: Dr. H.G. Sprenger*,
Dr. R. Doedens, Dr. E.H. Scholvinck, Drs. S. van Assen, C.J. Stek.

Universitair Medisch Centrum Sint Radboud, Nijmegen: Dr. P.P. Koopmans*,
Prof. dr. R. de Groot, Dr. M. Keuter, Dr. A.J.A.M. van der Ven, Dr. H.J.M. ter Hofstede,
Dr. M. van der Flier, Drs. A.M. Brouwer, Dr. A.S.M. Dofferhoff.

Universitair Medisch Centrum Utrecht, Utrecht: Prof. dr. A.I.M. Hoepelman*,
 Dr. T. Mudrikova, Dr. M.M.E. Schneider, Drs. C.A.J.J. Jaspers, Dr. P.M. Ellerbroek,
 Dr. E.J.G. Peters, Dr. L.J. Maarschalk-Ellebroek, Dr. J.J. Oosterheert, Dr. J.E. Arends,
 Dr. M.W.M. Wassenberg, Dr. J.C.H. van der Hilst.

Vrije Universiteit Amsterdam, Amsterdam: Prof. dr. S.A. Danner*, Dr. M.A. van Agtmael,
 Drs. J. de Vocht, Dr. R.M. Perenboom, Drs. F.A.P. Claessen, Drs. W.F.W. Bierman,
 Drs. E.V. de Jong, Drs. E.A. bij de Vaate.

Wilhelmina Kinderziekenhuis, Utrecht: Dr. S.P.M. Geelen, Dr. T.F.W. Wolfs.

Ziekenhuis Rijnstate, Arnhem: Dr. C. Richter*, Dr. J.P. van der Berg, Dr. E.H. Gisolf.

Ziekenhuis Walcheren, Vlissingen: Drs. M. van den Berge*, Drs. A. Stegeman.

Medisch Centrum Leeuwarden, Leeuwarden: Drs. D.P.F. van Houte*, Dr. M.B. Polée,
 Dr. M.G.A. van Vonderen.

Sint Elisabeth Hospitaal, Willemstad - Curaçao: Dr. C. Winkel, Dr. A.J. Duits.

Virologists

Academisch Medisch Centrum bij de Universiteit van Amsterdam, Amsterdam:
 Dr. N.K.T. Back, Dr. M.E.G. Bakker, Dr. H.L. Zaaijer. Prof. dr. B. Berkhout,
 Dr. S. Jurriaans.

CLB Stichting Sanquin Bloedvoorziening, Amsterdam: Dr. Th. Cuijpers.

Onze Lieve Vrouwe Gasthuis, Amsterdam: Dr. P.J.G.M. Rietra, Dr. K.J. Roozendaal.

Slotervaart Ziekenhuis, Amsterdam: Drs. W. Pauw, Drs. P.H.M. Smits,
 Dr. A.P. van Zanten.

VU Medisch Centrum, Amsterdam: Dr. B.M.E. von Blomberg, Dr. A. Pettersson,
 Dr. P. Savelkoul.

Ziekenhuis Rijnstate, Arnhem: Dr. C.M.A. Swanink.

HAGA, locatie Leyenburg, Den Haag: Dr. P.F.H. Franck, Dr. A.S. Lampe.

Medisch Centrum Haaglanden, locatie Westeinde, Den Haag: Drs. C.L. Jansen.

Streeklaboratorium Twente, Enschede: Dr. R. Hendriks.

Streeklaboratorium Groningen, Groningen: Dr. C.A. Benne.

Streeklaboratorium Volksgezondheid Kennemerland, Haarlem: Dr. J. Schirm,
 Dr. D. Veenendaal.

Laboratorium voor de Volksgezondheid in Friesland, Leeuwarden: Dr. H. Storm,
 Drs. J. Weel, Drs. J.H. van Zeijl.

Leids Universitair Medisch Centrum, Leiden: Dr. H.C.J. Claas, Prof. dr. A.C.M. Kroes.

Academisch Ziekenhuis Maastricht, Maastricht: Prof. dr. C.A.M.V.A. Bruggeman,
 Drs. V.J. Goossens.

Universitair Medisch Centrum Sint Radboud, Nijmegen: Prof. dr. J.M.D. Galama,
 Dr. W.J.G. Melchers, Dr. Verduyn-Lunel.

Erasmus Medisch Centrum, Rotterdam: Dr. G.J.J. van Doornum, Dr. H.G.M. Niesters,
 Prof. dr. A.D.M.E. Osterhaus, Dr. M. Schutten.

Sint Elisabeth Ziekenhuis, Tilburg: Dr. A.G.M. Buiting.

Universitair Medisch Centrum Utrecht, Utrecht: Dr. C.A.B. Boucher, Dr. E. Boel,
 Dr. R. Schuurman.

Catharina Ziekenhuis, Eindhoven: Dr. A.F. Jansz, Drs. M. Wulf.

Pharmacologists:

Medisch Centrum Alkmaar, Alkmaar: Dr. A. Veldkamp.
 Slotervaart Ziekenhuis, Amsterdam: Prof. dr. J.H. Beijnen, Dr. A.D.R. Huitema.
 Universitair Medisch Centrum Sint Radboud, Nijmegen: Dr. D.M. Burger.
 Academisch Medisch Centrum bij de Universiteit van Amsterdam, Amsterdam:
 Drs. H.J.M. van Kan.

HIV Treatment Centres

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 Catharina Ziekenhuis, Postbus 1350, 5602 ZA Eindhoven
 Emma kindziekenhuis, AMC Amsterdam, Meibergdreef 9, 1105 AZ Amsterdam
 Erasmus Medisch Centrum, Dr. Molewaterplein 40, 3015 GD Rotterdam
 Haga, locatie Leyenburg, Leyweg 275, 2545 CH Den Haag
 Isala Klinieken, locatie Sophia, Dokter van Heesweg 2, 8025 AB Zwolle
 Kennemer Gasthuis, locatie EG, Boerhaavelaan 22, 2000 AK Haarlem
 Leids Universitair Medisch Centrum, Rijnsburgerweg 10, 2333 AA Leiden
 Medisch Centrum Alkmaar, Wilhelminalaan 12, 1815 JD Alkmaar
 Medisch Centrum Haaglanden, locatie Westeinde, Lijnbaan 32, 2512 VA Den Haag
 Medisch Centrum Leeuwarden, locatie Zuid, H. Dunantweg 2, 8934 AD Leeuwarden
 Medisch Centrum Rijnmond Zuid, locatie Clara, Olympiaweg 350, 3078 HT Rotterdam
 Medisch Spectrum Twente, Postbus 50, 7500 KA Enschede
 Onze Lieve Vrouwe Gasthuis, Locatie Oosterpark, 1e Oosterparkstraat 179, 1091 HA Amsterdam
 Onze Lieve Vrouwe Gasthuis, Locatie Prinsengracht, Prinsengracht 769, 1017 JZ Amsterdam
 Stichting Medisch Centrum Jan van Goyen, Jan van Goyenkade 1, 1075 HN Amsterdam
 Slotervaartziekenhuis, Louwesweg 6, 1066 CE Amsterdam
 Erasmus Medisch Centrum – Sophia, Dr. Molenwaterplein 40, 3015 GD Rotterdam
 Sint Elisabeth Ziekenhuis, Hilvarenbeekseweg 60, 5022 GC Tilburg
 Sint Lucas Andreas Ziekenhuis, Postbus 9243, 1006 AE Amsterdam
 Streekziekenhuis Walcheren, Koudekerkseweg 88, 4382 EE Vlissingen
 Universitair Medisch Centrum Groningen, Oostersingel 59, 9715 EZ Groningen
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