**Supplementary Table 1. Laboratory tests offered to STI clinic clients 2005-2016, Amsterdam, the Netherlands**

|  |  |  |  |
| --- | --- | --- | --- |
| **STI (test)** | **Heterosexual men** | **MSM** | **Women**  |
| **Chlamydia**  |  |  |  |
| Urogenital (1,2) | * All
 | * All
 | * All
 |
| Anorectal (1,2,3) |  | * < May 2014: receptive anal sex
* >= May 2014: all MSM
 | * < May 2014: receptive anal sex
* >= May 2014: High risk womena
 |
| Oropharyngeal (2) |  | * >= January 2011: all MSM
 | * >= January 2011: High risk womena who reported receptive oral sex
 |
|  |  |  |  |
| **Gonorrhoea** |  |  |  |
| Urogenital (1,2,4) | * <2012 all heterosexual men
* 2012-2014 at risk heterosexual menb
* >=2015 all heterosexual men
 | * All
 | * <2012 all women
* 2012-2014 at risk womenb
* >=2015 all women
 |
| Anorectal (1,2,4) |   | * All
 | * Receptive anal sexc
* High risk womena
 |
| Oropharyngeal (1,2,4) |  | * All
 | * High risk womena who reported receptive oral sex
 |
|  |  |  |  |
| **HIV** (5,6,7) | * < 2007: on indication
* 2007-2011: all heterosexual men
* 2012-2016: at risk heterosexual menb
 | * < 2007: on indication
* 2007-2016: all MSM
 | * < 2007: on indication
* 2007-2011: all women
* 2012-2016: at risk womenb
 |
|  |  |  |  |
| **Syphilis** (8,9) | * 2005-2011: all heterosexual men
* 2012-2016: at risk heterosexual menb
 | * 2005-2016: all MSM
 | * 2005-2011: all women
* 2012-2016: at risk womenb
 |
|  |  |  |  |
| **Hepatitis B**d (10,11) | * April 2006 – May 2014: all heterosexual men (10,11)
* >= May 2014: commercial sex workers / non–Western-European and non-North-American ethnicity
 | * April 2006 – 2016: all MSM
 | * April 2006 – May 2014: all women
* >= May 2014: commercial sex workers / non–Western-European and non-North-American ethnicity
 |

List of abbreviations:

CT: *Chlamydia trachomatis*; NG: *Neisseria gonorrhoeae*; MSM: men who sex with men; X: no test requested

a High risk women: women who were notified, reported symptoms, reported commercial sex work, reported receptive anal sex (until 2009), and/or Sub-Saharan African clients who were uninsured

b Reporting STI related symptoms, being notified of an STI, and/or a non–Western-European and non-North-American ethnicity or partners of people with these ethnicities. Until 2015, reporting 3 or more sex partners was also an indication to be classified as high-risk

c 2012-2014: not to low risk women (women without any risk-factor from footnote b)

d clients were routinely screened for hepatitis B unless a client was known to be immune or having completed vaccination.

1. < 2008 Cobas Amplicor (Roche, California, USA)
2. >= 2008 Aptima CT and the CT/NG combo assays for the detection of rRNA (Hologic, Marlborough, MA, USA)
3. >=2005, in MSM all anorectal mucosal, ulcer or bubo samples positive for CT were tested further with a pmpH based in-house real-time PCR to discriminate between LGV and non-LGV genotypes
4. In case of symptoms, being notified, sex work, or MSM, urogenital, anorectal (both until May 2014), and oropharyngeal NG (until 2008) were tested by culture (OXOID; CHOC, Wesel, Germany). Since May 2014 NG culture was only routinely performed in the case of a positive NAAT, to determine antimicrobial resistance.
5. Rapid HIV test (Alere Determine HIV – 1/2 antibody test, Alere Inc., Waltham, MA, USA). Used in MSM, clients who reported STI related symptoms, clients who were notified, commercial sexworkers, until 2009 in women who reported receptive anal intercourse, until 2012 to uninsured Sub-Saharan African clients, and since 2012 to all Sub-Saharan African clients. Not used during outreach based consultations.
6. Reactive or indeterminate samples were confirmed by HIV Ag/Ab combo test (until May 2013: Axsym, Abbott Laboratories, Illinois, USA; from May 2013: LIAISON® XL Murex, Diasorin, Saluggia, Italy) and line immunoassay (Inno-Lia HIV I/II Score; Innogenetics, Ghent, Belgium). If these confirmations were indeterminate or negative, a Vidas P24-antigen test (Biomerieux, Marcy l’Etoile, France) was performed.
7. Low-risk clients, outreach based consultations and since May 2014 MSM were screened with above (6) mentioned HIV Ag/Ab combo tests, and – if applicable – confirmatory tests.
8. Treponema pallidum particle agglutination assay (until March 2013: Fujirebio, Tokyo, Japan) and from March 2013 with the Treponema Screen (LIAISON® XL, Diasorin, Saluggia, Italy).
9. The Rapid Plasma Reagin (RPR) card test and the FTA-absorption test (Nosticon and Trepo-spot IF; Biomérieux, Marcy l’Etoile, France) were performed to diagnose, confirm, and classify the stage of syphilis infection.
10. Anti-HBc test until June 2013: Axsym; Abbott Laboratories; Illinois, USA; from June 2013: LIAISON® XL, Diasorin, Saluggia, Italy
11. HBsAg (if Anti-HBc positive) until June 2013: Axsym; Abbott Laboratories; Illinois, USA; from June 2013: LIAISON® XL, Diasorin, Saluggia, Italy.

**Supplementary Table 2. Univariable and multivariable logistic GEE analysis1 of the associations of having a bacterial STI diagnosis2 and being a victim of a sexual assault, demographics, sexual behaviour, and HIV status among 166,808 clinic visits from females attending the STI clinic in Amsterdam, the Netherlands, January 2005 - September 2016**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **No bacterial STI** | **Bacterial STI present** | **Univariable analysis** |  | **Multivariable analysis**3 |  |
|  | **N=147,450** | **N=19,358** |  |  |  |  |
| **Variable** | n (%) | n (%) | OR (95%CI) | p-value | aOR (95%CI) | p-value |
| **Victim of sexual assault** |  |  |  |  |  |  |
| No | 146,503 (88.4) | 19,239 (11.6) | 1 | 0.69 | 1 | 0.51 |
| Yes | 947 (88.8) | 119 (11.2) | 0.96 (0.80-1.16) |  | 0.94 (0.77-1.13) |  |
|  |  |  |  |  |  |  |
| Period4 |  |  |  |  |  |  |
| 2005-2008 | 38,195 (89.2%) | 4609 (10.8%) | 1 | <0.001 |  |  |
| 2009-2012 | 45,957 (88.4%) | 6040 (11.6%) | 1.07 (1.03-1.12) |  |  |  |
| 2013-2016 | 63,298 (87.9%) | 8709 (12.1%) | 1.11 (1.06-1.15) |  |  |  |
|  |  |  |  |  |  |  |
| **Demographics** |  |  |  |  |  |  |
| Age in years5 |  |  |  |  |  |  |
| < 25 | 83,805 (85.8%) | 13,820 (14.2%) | 1 | <0.001 | 1 | <0.001 |
| 25 – 34 | 48,483 (91.3%) | 4614 (8.7%) | 0.59 (0.57-0.61) |  | 0.53 (0.51-0.55) |  |
| 35 – 44 | 10,077 (94.3%) | 610 (5.7%) | 0.38 (0.35-0.41) |  | 0.34 (0.31-0.37) |  |
| 45 – 54 | 4039 (94.4%) | 241 (5.6%) | 0.35 (0.31-0.41) |  | 0.31 (0.27-0.36) |  |
| ≥ 55 | 1043 (93.5%) | 73 (6.5%) | 0.39 (0.28-0.53) |  | 0.35 (0.25-0.48) |  |
| Ethnicity |  |  |  |  |  |  |
| Dutch | 101,124 (88.9%) | 12,573 (11.1%) | 1 | <0.001 | 1 | <0.001 |
| East-European | 8700 (89.4%) | 1030 (10.6%) | 1.02 (0.94-1.10) |  | 1.13 (1.03-1.23) |  |
| Turkish | 729 (85.6%) | 123 (14.4%) | 1.36 (1.10-1.69) |  | 1.39 (1.13-1.71) |  |
| North-African | 1924 (85.8%) | 319 (14.2%) | 1.34 (1.18-1.52) |  | 1.39 (1.22-1.58) |  |
| Sub-Saharan Africa | 3223 (89.8%) | 365 (10.2%) | 0.90 (0.81-1.01) |  | 0.96 (0.86-1.08) |  |
| Antillean | 2110 (83.3%) | 423 (16.7%) | 1.61 (1.44-1.81) |  | 1.64 (1.46-1.84) |  |
| Surinamese | 11,307 (83.1%) | 2306 (16.9%) | 1.61 (1.53-1.70) |  | 1.71 (1.62-1.81) |  |
| South-American | 4430 (89.9%) | 495 (10.1%) | 0.92 (0.83-1.02) |  | 1.19 (1.07-1.32) |  |
| Asian | 4322 (87.3%) | 627 (12.7%) | 1.17 (1.07-1.28) |  | 1.27 (1.16-1.39) |  |
| Other/unknown | 9581 (89.7%) | 1097 (10.3%) | 0.92 (0.86-0.99) |  | 1.01 (0.94-1.08) |  |
| Residence |  |  |  |  |  |  |
| Amsterdam | 112,569 (88.7%) | 14,330 (11.3%) | 1 | <0.001 | 1 | <0.001 |
| Province of North-Holland | 17,103 (87.0%) | 2545 (13.0%) | 1.15 (1.10-1.21) |  | 1.09 (1.04-1.14) |  |
| Elsewhere in the Netherlands | 10,180 (87.7%) | 1428 (12.3%) | 1.11 (1.04-1.18) |  | 1.05 (0.99-1.12) |  |
| Other/unknown | 7598 (87.8%) | 1055 (12.2%) | 1.10 (1.03-1.18) |  | 1.09 (1.02-1.17) |  |
|  |  |  |  |  |  |  |
| **HIV status6** |  |  |  |  |  |  |
| HIV negative | 122,525 (87.8%) | 16,990 (12.2%) | 1 | <0.001 | 1 | <0.001 |
| HIV known positive | 132 (86.8%) | 20 (13.2%) | 1.14 (0.68-1.91) |  | 1.55 (0.90-2.69) |  |
| HIV newly diagnosed7 | 135 (93.1%) | 10 (6.9%) | 0.54 (0.29-1.01) |  | 0.73 (0.39-1.39) |  |
| HIV not tested | 24,658 (91.3%) | 2338 (8.7%) | 0.67 (0.63-0.70) |  | 0.57 (0.54-0.60) |  |
|  |  |  |  |  |  |  |
| **Sexual behaviour in the preceding 6 months** |  |  |  |  |  |  |
| Number of sexual contacts  |  |  |  |  |  |  |
| 0-1 sexual contacts | 27,740 (88.3%) | 3684 (11.7%) | 1 | <0.001 | 1 | <0.001 |
| 2 sexual contacts | 28,667 (87.6%) | 4052 (12.4%) | 1.08 (1.03-1.14) |  | 1.09 (1.04-1.15) |  |
| 3-4 sexual contacts | 29,809 (88.0%) | 4056 (12.0%) | 1.06 (1.01-1.12) |  | 1.03 (0.98-1.09) |  |
| >4 sexual contacts | 22,844 (88.6%) | 2945 (11.4%) | 1.06 (1.00-1.12) |  | 1.18 (1.11-1.26) |  |
| No information8 | 38,390 (89.3%) | 4621 (10.7%) | 0.96 (0.91-1.00) |  | 1.00 (0.96-1.05) |  |
| Commercial sex work9 |  |  |  |  |  |  |
| No | 133,744 (88.2%) | 17,955 (11.8%) |  | <0.001 | 1 | <0.001 |
| Yes | 13,652 (90.7%) | 1396 (9.3%) | 0.81 (0.76-0.87) |  | 0.84 (0.77-0.91) |  |

List of abbreviations:

95%CI: 95% confidence interval, aOR: adjusted odds ratio, GEE: generalized estimating equations, OR: odds ratio, STI: Sexually transmitted infection

1. GEE analysis was performed to account for correlated data (repeated measures)
2. Clients screened for bacterial STI (*Chlamydia trachomatis*, gonorrhoea, and/or infectious syphilis at time of current visit)
3. N=166,744 consultations included. All variables in this table with a univariable p-value < 0.25 were included in the multivariable model. The variable of interest, “being a victim of sexual assault”, was forced in the multivariable model.
4. Because of multicollinearity with “number of sexual partners”, period was excluded from the multivariable model
5. Missing for 3 consultations
6. Before 2007 HIV was only tested on indication. From 2007 through 2011 all clients were offered an HIV test. Since 2012, young low-risk heterosexual women are not tested for HIV.
7. Diagnosed in the first consultation after the sexual assault
8. Question about the number of sexual contacts in the preceding 6 months is part of the clinic protocol since 2009. Due to this information about number of sexual contacts is not available for 43,011 consultations.
9. Missing for 61 consultations

**Supplementary Table 3. Univariable and multivariable logistic GEE analysis1 of the associations of having a bacterial STI diagnosis2 and being a victim of a sexual assault, demographics, sexual behaviour, and HIV status among 194,954 clinic visits from males attending the STI clinic in Amsterdam, the Netherlands, January 2005 - September 2016**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **No bacterial STI** | **Bacterial STI present** | **Univariable analysis** |  | **Multivariable analysis3** |  |
|  | **N=160,407** | **N=34,547** |  |  |  |  |
| **Variable** | n (%) | n (%) | OR (95%CI) | p-value | aOR (95%CI) | p-value |
| **Victim of sexual assault** |  |  |  |  |  |  |
| No | 160,289 (82.3%) | 34,530 (17.7%) | 1 | 0.190 | 1 | 0.043 |
| Yes | 118 (87.4%) | 17 (12.6%) | 0.70 (0.41-1.19) |  | 0.60 (0.36-0.98) |  |
|  |  |  |  |  |  |  |
| Period4 |  |  |  |  |  |  |
| 2005-2008 | 46,964 (84.2%) | 8823 (15.8%) | 1 | <0.001 |  |  |
| 2009-2012 | 53,832 (82.2%) | 11,662 (17.8%) | 1.07 (1.04-1.11) |  |  |  |
| 2013-2016 | 59,611 (80.9%) | 14,062 (19.1%) | 1.14 (1.10-1.18) |  |  |  |
|  |  |  |  |  |  |  |
| **Demographics** |  |  |  |  |  |  |
| Age in years5 |  |  |  |  |  |  |
| < 25 | 41,933 (81.6%) | 9429 (18.4%) | 1 | <0.001 | 1 | <0.001 |
| 25 – 34 | 58,465 (82.7%) | 12,206 (17.3%) | 0.89 (0.86-0.92) |  | 0.80 (0.77-0.82) |  |
| 35 – 44 | 33,163 (81.5%) | 7548 (18.5%) | 0.88 (0.85-0.92) |  | 0.63 (0.60-0.66) |  |
| 45 – 54 | 18,720 (81.8%) | 4158 (18.2%) | 0.84 (0.79-0.88) |  | 0.51 (0.48-0.53) |  |
| ≥ 55 | 8122 (87.1%) | 1205 (12.9%) | 0.61 (0.56-0.66) |  | 0.38 (0.35-0.42) |  |
| Ethnicity |  |  |  |  |  |  |
| Dutch | 102,783 (83.4%) | 20,475 (16.6%) | 1 | <0.001 | 1 | <0.001 |
| East-European | 3756 (81.0%) | 883 (19.0%) | 1.25 (1.14-1.36) |  | 1.11 (1.02-1.21) |  |
| Turkish | 2585 (84.6%) | 470 (15.4%) | 0.97 (0.86-1.09) |  | 1.09 (0.97-1.22) |  |
| North-African | 4388 (83.7%) | 854 (16.3%) | 1.09 (1.00-1.18) |  | 1.28 (1.17-1.39) |  |
| Sub-Saharan Africa | 4361 (84.2%) | 818 (15.8%) | 0.95 (0.87-1.04) |  | 1.18 (1.08-1.29) |  |
| Antillean | 2946 (75.1%) | 975 (24.9%) | 1.68 (1.54-1.84) |  | 1.69 (1.54-1.85) |  |
| Surinamese | 12,683 (77.4%) | 3695 (22.6%) | 1.60 (1.52-1.68) |  | 1.88 (1.79-1.97) |  |
| South-American | 5203 (78.1%) | 1462 (21.9%) | 1.43 (1.33-1.55) |  | 1.12 (1.04-1.20) |  |
| Asian | 5698 (80.9%) | 1349 (19.1%) | 1.17 (1.08-1.26) |  | 1.05 (0.98-1.13) |  |
| Other/unknown | 16,004 (81.8%) | 3566 (18.2%) | 1.13 (1.08-1.19) |  | 1.00 (0.95-1.05) |  |
| Residence |  |  |  |  |  |  |
| Amsterdam | 121,756 (82.0%) | 26813 (18.0%) | 1 | <0.001 | 1 | 0.049 |
| Province of North-Holland | 17,521 (83.9%) | 3372 (16.1%) | 0.90 (0.86-0.94) |  | 1.00 (0.95-1.04) |  |
| Elsewhere in the Netherlands | 11,831 (81.6%) | 2672 (18.4%) | 1.04 (0.99-1.10) |  | 1.07 (1.02-1.13) |  |
| Other/unknown | 9299 (84.6%) | 1690 (15.4%) | 0.91 (0.86-0.96) |  | 1.03 (0.98-1.09) |  |
| HIV status6 |  |  |  |  |  |  |
| HIV negative | 130,957 (84.4%) | 24,143 (15.6%) | 1 | <0.001 | 1 | <0.001 |
| HIV known positive | 13,669 (67.0%) | 6736 (33.0%) | 2.53 (2.42-2.64) |  | 2.07 (1.97-2.17) |  |
| HIV newly diagnosed7 | 856 (60.5%) | 559 (39.5%) | 3.17 (2.83-3.54) |  | 2.50 (2.24-2.81) |  |
| HIV not tested | 14,925 (82.8%) | 3109 (17.2%) | 1.14 (1.09-1.19) |  | 1.18 (1.13-1.23) |  |
|  |  |  |  |  |  |  |
| **Sexual behaviour in the preceding 6 months** |  |  |  |  |  |  |
| Sex of sexual partner(s)  |  |  |  |  |  |  |
| Female | 96,571 (86.5%) | 15,091 (13.5%) | 1 | <0.001 | 1 | <0.001 |
| Male | 57,062 (75.8%) | 18,243 (24.2%) | 2.00 (1.94-2.06) |  | 1.95 (1.88-2.02) |  |
| Both male and female | 6774 (84.8%) | 1213 (15.2%) | 1.20 (1.12-1.28) |  | 1.27 (1.18-1.36) |  |
| Number of sexual contacts |  |  |  |  |  |  |
| 0-2 sexual contacts | 34,142 (85.3%) | 5865 (14.7%) | 1 | <0.001 | 1 | <0.001 |
| 3-4 sexual contacts | 29,306 (83.1%) | 5977 (16.9%) | 1.19 (1.14-1.24) |  | 1.15 (1.10-1.20) |  |
| 5-8 sexual contacts | 25,373 (81.6%) | 5732 (18.4%) | 1.30 (1.25-1.36) |  | 1.22 (1.17-1.28) |  |
| >8 sexual contacts | 24,477 (75.1%) | 8128 (24.9%) | 1.78 (1.70-1.86) |  | 1.54 (1.47-1.61) |  |
| No information8 | 47,109 (84.2%) | 8845 (15.8%) | 1.14 (1.10-1.19) |  | 1.15 (1.11-1.19) |  |
| Commercial sex work9 |  |  |  |  |  |  |
| No | 158,083 (82.3%) | 33,983 (17.7%) | 1 | 0.001 | 1 | <0.001 |
| Yes | 1985 (80.1%) | 493 (19.9%) | 1.23 (1.09-1.39) |  | 0.80 (0.71-0.90) |  |
| Paying for sex10 |  |  |  |  |  |  |
| No | 149,528 (81.7%) | 33,551 (18.3%) | 1 | <0.001 | 1 | <0.001 |
| Yes | 10,540 (92.0%) | 921 (8.0%) | 0.47 (0.44-0.50) |  | 0.56 (0.52-0.60) |  |

List of abbreviations:

95%CI: 95% confidence interval, aOR: adjusted odds ratio, GEE: generalized estimating equations, OR: odds ratio, STI: Sexually transmitted infection

1. GEE analysis was performed to account for correlated data (repeated measures)
2. Clients screened for bacterial STI (*Chlamydia trachomatis*, gonorrhoea, and/or infectious syphilis at time of current visit)
3. N=194,505 consultations included. All variables in this table with a univariable p-value < 0.25 were included in the multivariable model. The variable of interest, “being a victim of sexual assault”, was forced in the multivariable model.
4. Because of multicollinearity with “number of sexual partners”, period was excluded from the multivariable model
5. Missing for 5 consultations
6. Before 2007 HIV was only tested on indication. Between 2007 and 2012 all clients were offered an HIV test. Since 2012, HIV is not tested in young low-risk heterosexual men.
7. Diagnosed in the first consultation after the sexual assault
8. Question about the number of sexual contacts in the preceding 6 months is part of the clinic protocol since 2009. Due to this information about number of sexual contacts is not available for 55,954 consultations.
9. Missing for 410 consultations
10. Missing for 414 consultations