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WHO IS PROVIDING HIV TESTING AND DIAGNOSIS? COMPARING GENERAL PRACTITIONERS AND SEXUAL HEALTH CENTRES IN FIVE REGIONS IN THE NETHERLANDS

^{1,2,3}D Twisk*, ⁴S Bogers*, ⁵L Beckers, ^{1,2,3}H Götz, ^{1,3}A Meima, ⁷M Kroone, ⁷E Hooimenborg, ⁸A Ott, ⁹M Luning-Koster, ^{10,11}N Dukers-Muijters, ^{11,12}C Hoebe, ¹³C Kampman, ¹⁴F Bosma, ^{1,7}M Schim van der Loeff, ⁴S Geerlings, ^{5,6,15}J van Bergen. ¹Department of Infectious Disease Control, Municipal Public Health Service Rotterdam-Rijnmond, Rotterdam, The Netherlands; ²Department of Public Health, Erasmus MC, University Medical Center Rotterdam, Rotterdam, The Netherlands; ³Department Research and Business Intelligence, Municipality of Rotterdam, Rotterdam, The Netherlands; ⁴Department of Internal Medicine, Division of Infectious Diseases, Amsterdam University Medical Centers, location Academic Medical Center, Amsterdam, The Netherlands; ⁵Department of General Practice, Amsterdam University Medical Centers, location Academic Medical Center, Amsterdam, The Netherlands; ⁶Centre for Infectious Disease Control, National Institute for Public Health and the Environment (RIVM), Bilthoven, The Netherlands; ⁷Department of Infectious Diseases, Public Health Service Amsterdam, Amsterdam, The Netherlands; ⁸Certe, Department of Medical Microbiology, Groningen, The Netherlands; ⁹GGD Fryslân, Municipal Public Health Service Leeuwarden, Leeuwarden, The Netherlands; ¹⁰Department of Health Promotion, Care and Public Health Research Institute (CAPHRI), Maastricht, The Netherlands; ¹¹Department of Sexual Health, Infectious Diseases and Environmental Health, South Limburg Public Health Service, Heerlen, The Netherlands; ¹²Department of Social Medicine and Medical Microbiology, Care and Public Health Research Institute (CAPHRI), Maastricht University Medical Centre (MUMC+), Maastricht, The Netherlands; ¹³Public Health Service Twente, Enschede, The Netherlands; ¹⁴Laboratory for Medical Microbiology and Public Health, Hengelo, The Netherlands; ¹⁵STI AIDS Netherlands (SOA AIDS Nederland), Amsterdam, The Netherlands

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Background General practitioners (GPs) and sexual health centres (SHCs) are the main providers of STI and HIV testing in the Netherlands. We compared HIV testing by GPs versus SHCs to gain insight in strategies to improve HIV testing, stimulating timely HIV diagnosis.

Methods Laboratory data (2011–2018) on HIV testing by GPs and SHCs in five Dutch regions with varying levels of urbanisation were used. Mean regional HIV testing rates per 10,000 residents ≥ 15 years were compared between providers using negative binomial generalised additive models, and additionally stratified by sex and age (15–29y, 30–44y, 45–59y, ≥ 60 y). Chi-squared tests were used to compare percentage positive between providers.

Results Analysed data included 507,197 HIV tests (GP 36%, SHC 64%). The highest HIV testing rates and positivity were observed in highly urbanised regions, with large variation between regions. The HIV testing rates ranged from 28–178/10,000 residents by GPs and from 30–379/10,000 residents by SHCs. Testing rates by GPs were lower than by SHCs in two regions, while these rates were comparable in the others. In all regions, men were tested less by GPs than by SHCs; for women this varied per region. Among 15–29 year olds, GPs' testing rates were lower than SHCs', while this was reversed in older age categories. The overall mean HIV positivity was 0.5% for GPs and 0.4% for SHCs. In Amsterdam, positivity was higher among individuals tested by GPs, but in the other regions no difference was observed.

Conclusion This is the first study comparing HIV testing by GPs versus SHCs using laboratory data in the Netherlands. Our results show that besides SHCs, GPs also play a key role, especially in some subgroups, but large regional variation exists. Regional-specific interventions to improve GPs' HIV testing practices are needed for populations not attending the SHCs to ensure timely HIV diagnosis.

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NEVER TESTED FOR HIV: DIRECTIONS FOR TARGETED TESTING INTERVENTIONS AMONG MEN WHO HAVE SEX WITH MEN

¹H Zimmermann*, ¹W van Bilsen, ^{1,2}A Boyd, ^{1,3}U Davidovich, on behalf of HIV Transmission Elimination Initiative Amsterdam (H-TEAM). ¹Public Health Service Amsterdam, Amsterdam, The Netherlands; ²HIV Monitoring Foundation, Amsterdam, The Netherlands; ³Department of Social Psychology, University of Amsterdam, Amsterdam, The Netherlands

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Men who have sex with men (MSM) who are unaware of their HIV-infection contribute to onward HIV transmission and are more likely to progress to symptomatic HIV disease. We assessed determinants of never-testing for HIV among MSM living in the Netherlands. Between April–July 2019, we conducted a nationwide cross-sectional survey among MSM on socio-demographics, HIV-testing behavior and sexual risk taking, which was distributed via gay networking sites/apps. Multivariable logistic regression was used to investigate characteristics associated with never-testing for HIV.

950 HIV-negative tested and 122 never-tested MSM completed the survey. In never-tested MSM, median age was 37 (IQR=22–51) years and 37 (30%) reported recent sexual risk behavior. Never-testing was associated with younger age (adjusted odds ratio [aOR] per year increase=0.98, 95%-confidence interval [CI]=0.97–1.00, $p=0.021$), having sex with men and women (aOR=2.93, 95%-CI=1.61–5.34, $p<0.001$), and not knowing others living with HIV (aOR=3.74, 95%-CI=2.28–6.13, $p<0.001$). A significant interaction effect between education level and residential area was observed ($p=0.001$). Among higher-educated MSM, those living outside a large urban area had higher odds of never-testing compared to those living in an urban area (aOR=6.26, 95%-CI=2.42–16.24, $p<0.001$). Lower-educated MSM had higher odds of never-testing irrespective of residential area (urban: aOR=12.06, 95%-CI=4.00–36.38; rural: aOR 9.29, 95%-CI=3.64–23.76; $p<0.001$ for both). Among MSM with recent sexual risk, never-testing was associated with having sex with men and women (aOR=2.80, 95%-CI=1.09–7.18, $p=0.032$) and not knowing others with HIV (aOR=4.91, 95%-CI=1.97–12.24, $p=0.001$). Based on this online sample of MSM, never-testing for HIV is more common in those who were younger, had lower education level, non-urban residency, had sex with men and women, and did not know someone with HIV. Only the latter two factors were observed among those with recent sexual risk behavior. Testing interventions for those never-tested should be tailored to residential area and education level, and inclusive of bisexuality.

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BACTERICIDAL ACTIVITY OF ESCULETIN IS ASSOCIATED WITH IMPAIRED CELL WALL SYNTHESIS BY TARGETING GLUTAMATE RACEMASE OF NEISSERIA GONORRHOEA

¹D Saluja*, ¹A Pawar, ¹C Konwar, ²U Chaudhry, ¹M Chopra, ¹P Jha. ¹University of Delhi, Delhi, India; ²Bhaskaracharya College of Applied Sciences, Delhi, India

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Background Antimicrobial resistance in *Neisseria gonorrhoeae* (NG), the causative organism of gonorrhea, has posed a