National Institute for Public Health
and the Environment
Ministry of Health, Welfare and Sport

Recently acquired HIV infections and associated factors among MSM diagnosed at Dutch sexual health centres

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Introduction

- Recent HIV infection (RHI) surveillance facilitates the understanding of transmission patterns and could support prevention strategies.
- Recent Infection Testing Algorithm (RITA) was implemented for surveillance purposes at Dutch sexual health centres (SHCs) in 2014-2017.
- The aim of this study was to explore proportions of RHI and associated factors among men who have sex with men (MSM) attending SHCs, relative to established HIV infections and being HIV-negative.

Methods

- Samples from MSM newly diagnosed with HIV were tested with an avidity assay. Cut-off values for Avidity Index (AI) were AI≤0.75 for RHI (≤6 months), AI between 0.76-0.84 for dubious results, and AI≥0.85 for established infection (>6 months).
- Results were merged with SHC surveillance data of all MSM attending SHCs during these years.
- Dubious and avidity results ≥0.85 were reclassified as RHI if an HIV-negative test result was registered within six months prior to diagnosis.
- Multivariable multinomial logistic regression was used to analyse risk factors for RHI with established HIV infection and HIV-negative as reference.

Detection of recent HIV infections (Figure 1)

- Of all MSM visiting SHCs between 2014-2017 0.8% was newly diagnosed with HIV.
- Coverage of RITA testing was 59%.
- Of MSM with a RITA result, 33% were classified by the assay as recent and 57% as established infection.
- The proportion of MSM with a RHI was 54% based on a recent HIV-negative test and/or RITA test result.

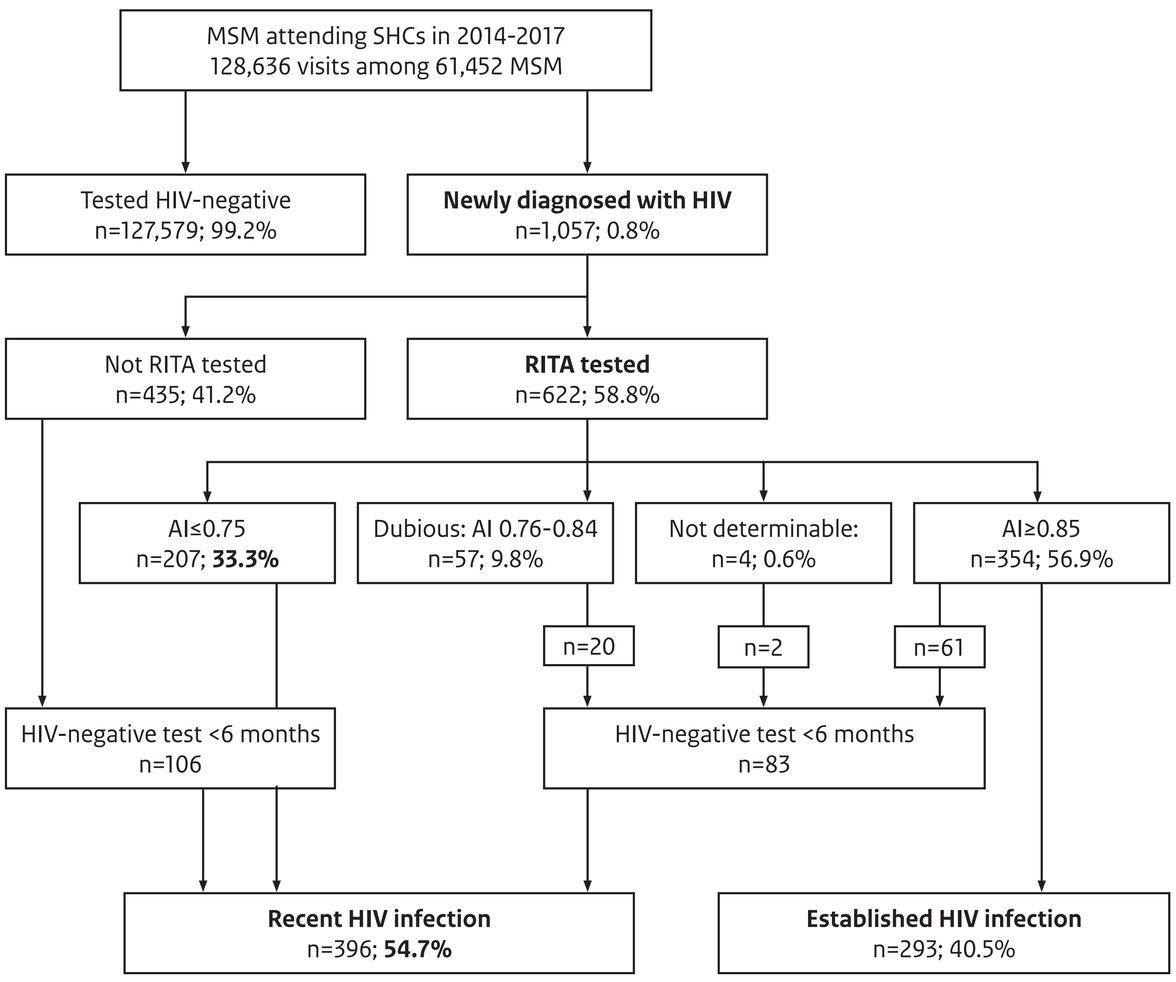

Figure 1. Detection of recent HIV infection among MSM attending sexual health centres (SHCs) in 2014-2017.

Explanatory models for RHI (Figure 2)

- RHI was relative to both outcomes associated with having had an STI diagnosis in the prior year, multiple sex partners, no condom use during the last sex contact, younger age, and being recently tested for HIV.
- Additionally, relative to HIV-negative individuals, RHI was associated with low/medium education, being of non-Western origin, having a non-Western partner, and reporting STI related symptoms. In contrast, relative to an established HIV infection, RHI was associated with being of Western origin and being notified by an (ex)-partner.

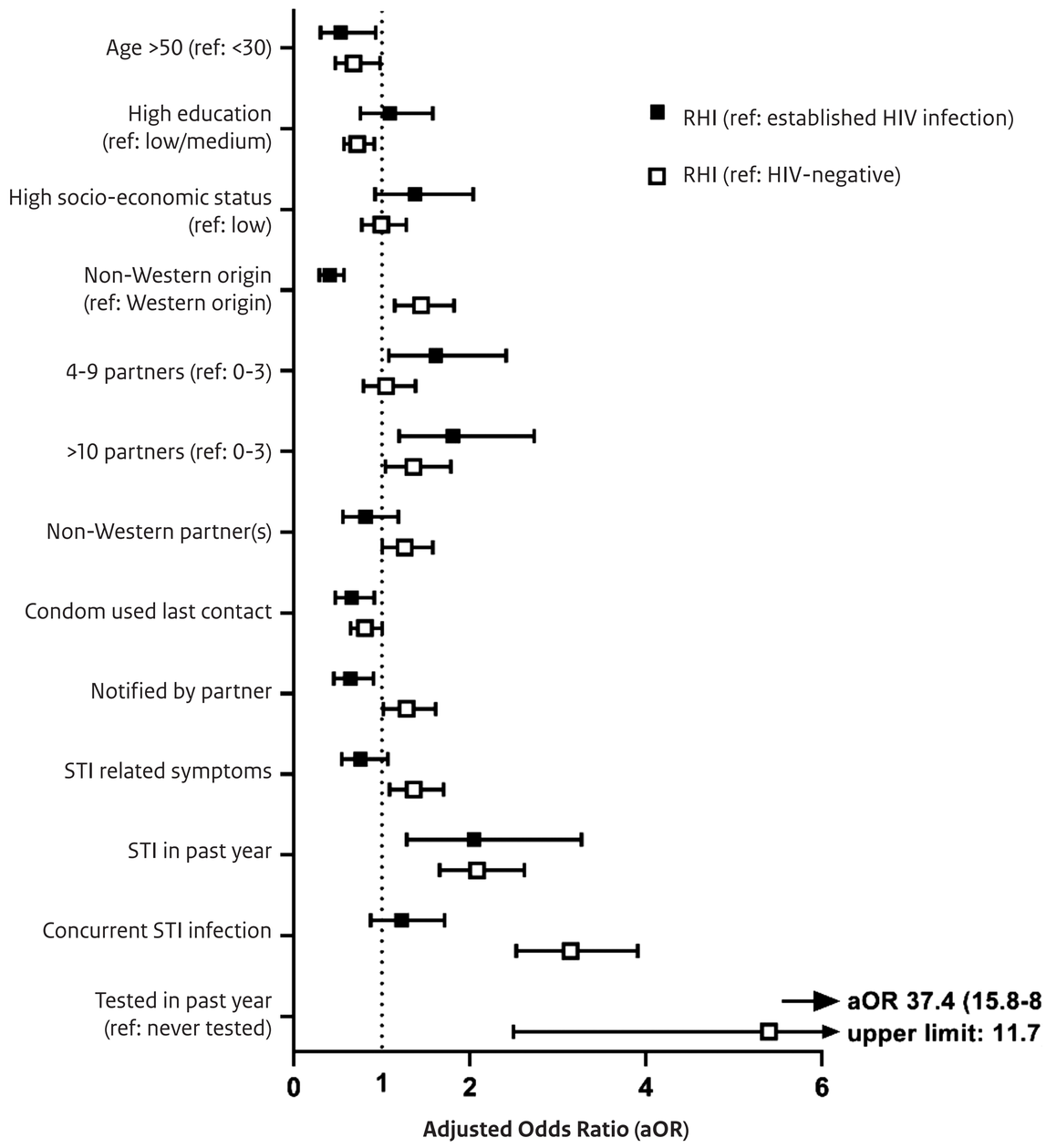

Figure 2. Risk factors associated with recent HIV infections relative to established HIV infections and being HIV-negative.

Conclusion

- The proportion of RHI was substantial among MSM attending SHCs indicating ongoing HIV transmission.
- Differentiation by reference group in explanatory models for RHI is important, as inverse associated factors such as (non-)Western origin were identified. Likely, associations relative to HIV-negative individuals follow those of acquiring HIV infection in general, whereas the comparison with established HIV infections rather reflects the testing behaviour of subgroups of MSM.
- Increased testing among MSM at high risk for HIV, especially among non-Western MSM, should be encouraged to increase early diagnosis of HIV.

Acknowledgements

- We thank all the participating SHCs and laboratories.

Published by
National Institute for Public Health and the Environment, RIVM
P.O. Box 1 | 3720 BA Bilthoven
The Netherlands
www.rivm.nl/en

011759