

Factors associated with presenting late or with advanced HIV disease in the Netherlands, 1996-2014

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Background

- Early testing for HIV and timely entry into care are crucial for optimising treatment outcomes of HIV-infected patients and for preventing further spread of HIV.
- We sought to investigate demographic and socio-economic risk factors for presentation with late or advanced HIV disease in HIV-infected patients in the Netherlands.

Methods

Patient population

- 20,965 HIV-infected patients registered for HIV care in the Netherlands between January 1996 and June 2014 from the ATHENA national observational HIV cohort.

Outcomes

- Late presentation: CD4 <350 cells/mm³ or AIDS
- Advanced presentation: CD4 <200 cells/mm³ or AIDS

Analysis

- Risk factors for late and advanced HIV disease were studied with logistic regression models adjusting for socio-demographic data.

Socio-economic variables

- Based on postal code at registration:
 - public health region
 - level of urbanisation
 - approximate socio-economic status based on average income, employment status, and level of education in the postal code area

Figure 2: Proportion of late presentation in 2010-2014 in the Netherlands by public health region.

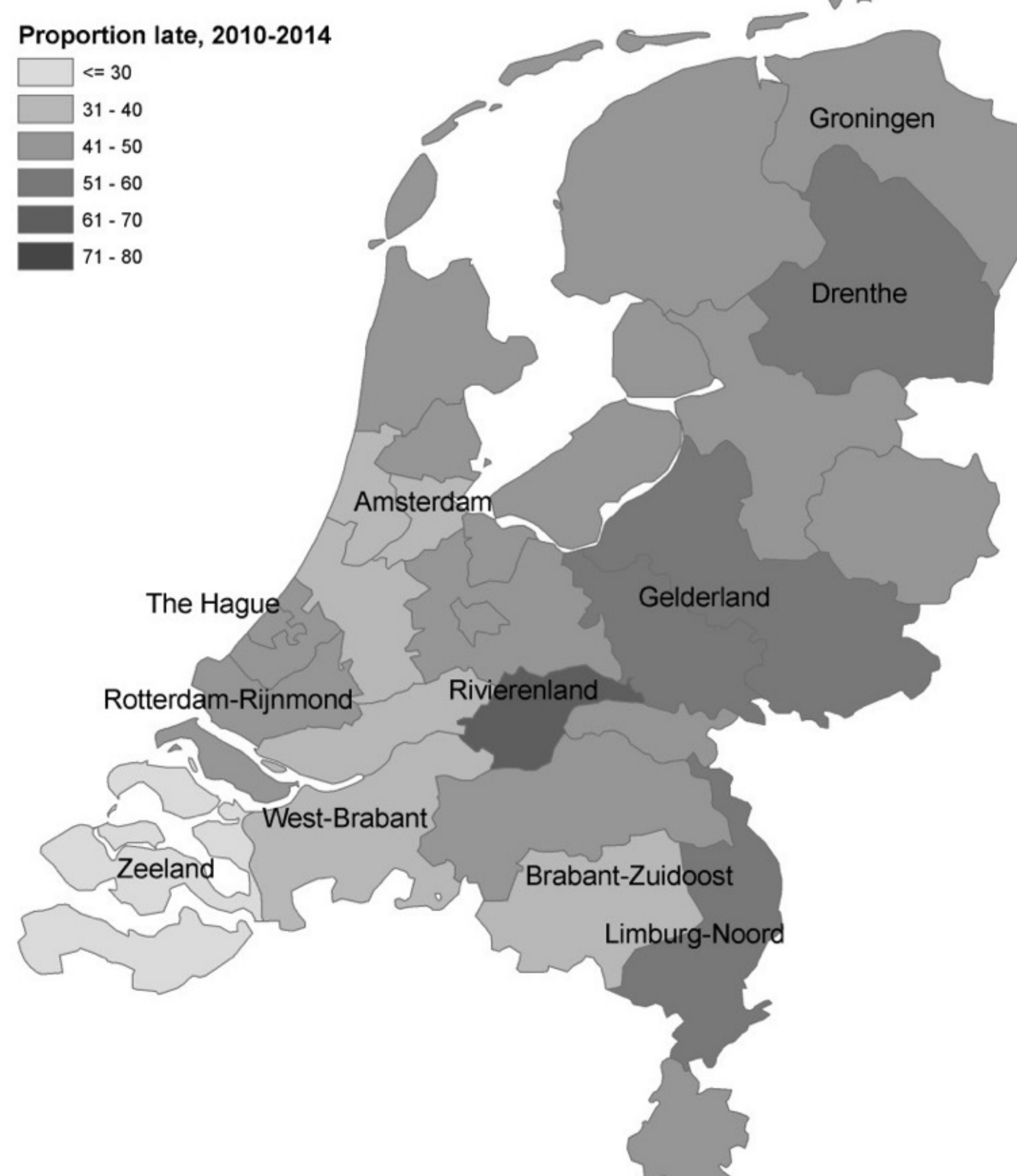
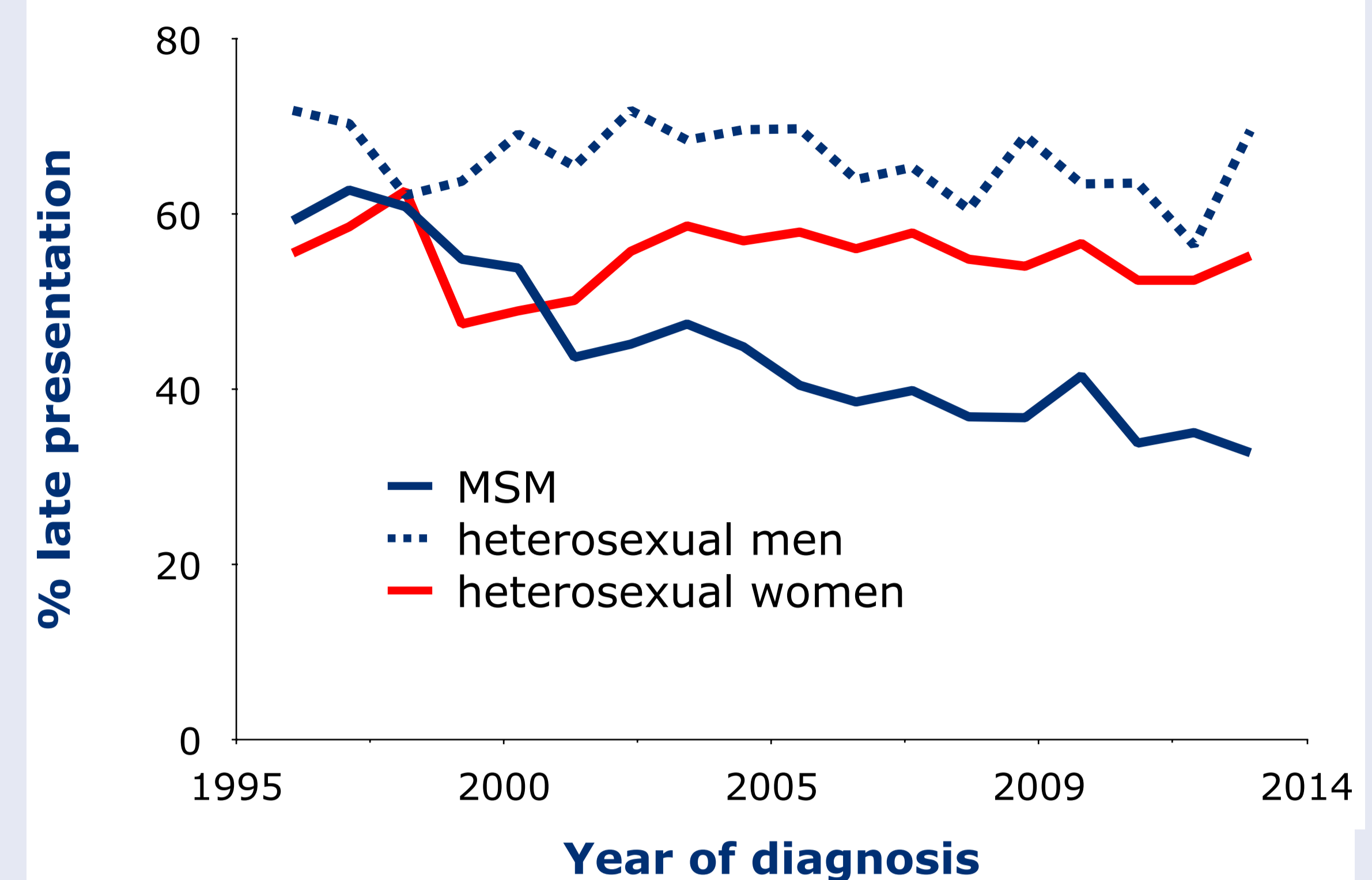


Figure 1: Proportion of patients presenting with late HIV infection; MSM: men who have sex with men.



Results

- Overall, late presentation declined from 62% in 1996 to 42% in 2013.
- This decline was largely due to men who have sex with men (Figure 1).
- Odds of late presentation differed by public health region (Figure 2), but there was no additional association with socio-economic status or level of urbanisation.

Table 1: Selected risk factors for late presentation for HIV patients in the Netherlands registered between January 1996 and June 2014; aOR: adjusted odds ratio; CI: confidence interval. Risk factors for advanced presentation were very similar.

	aOR (95% CI)
Transmission category	
Men who have sex with men	1
Heterosexual men	1.59 (1.44-1.75)
Heterosexual women	0.98 (0.89-1.08)
Age at registration [years]	
<30	0.63 (0.59-0.68)
30-49	1
>50	1.46 (1.33-1.60)
Region of origin	
Netherlands	1
Sub-Saharan Africa	2.11 (1.88-2.36)
South East Asia	2.14 (1.80-2.54)
Surinam	1.59 (1.37-1.84)
Caribbean	1.31 (1.13-1.53)
South America	1.23 (1.04-1.46)
Location of testing	
STI clinic / public health service	1
General practitioner	1.66 (1.50-1.83)
Hospital	3.27 (2.94-3.63)
Antenatal screening	1.76 (1.38-2.24)

Conclusions

- Although the overall rate of late presentation is declining, this decline is only apparent in MSM.
- Targeted programmes to reduce late HIV diagnosis should be prioritised for heterosexual men, people older than 50 years, migrant populations, and certain regions in the Netherlands.

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