Background The majority of oropharyngeal Neisseria gonorrhoeae (N. gonorrhoeae) infections are asymptomatic, and many oropharyngeal N. gonorrhoeae infections could remain undetected, creating a reservoir for ongoing transmission and drug resistance. It is yet unknown what the optimal testing policy is for oropharyngeal N. gonorrhoeae infections in men who have sex with men (MSM), as data on routine universal screening are missing.

Methods Surveillance data from all Dutch STI clinics between 2008–2017 were used (n=271,242 consultations). Oropharyngeal testing policy was defined as routine universal screening, that is ≥85% of MSM consultations included oropharyngeal testing per clinic per year, or as selective testing (<85% tested). The proportion infections missed using selective testing was calculated by extrapolating positivity found by routine universal screening. Independent risk factors for oropharyngeal N. gonorrhoeae were assessed among MSM routinely universally screened between 2016–2017 using backward multivariable logistic regression analyses.

Results Routine universal screening was performed in 90% (n=238,619) of consultations. Oropharyngeal N. gonorrhoeae positivity was higher using routine universal screening (5.5%, 95%CI 5.4–5.6, n=12,769) compared to selective testing (4.7%, 95%CI 4.4–5.0, n=799, P=0.001). When extrapolating, selective testing missed 43.2% of infections (95%CI 42.6–47.8%, n=659). The proportion oropharyngeal-only among tested was 55% for routine universal screening and 47% for selective testing. Independent risk factors for oropharyngeal N. gonorrhoeae were age <31 years (OR2.1, 95%CI 1.9–2.3) age 31–43 years (OR1.7, 95%CI 1.6–2.0, compared to ≥43 years), being notified for any STI (OR2.0, 95%CI1.9–2.1), concurrent urogenital N. gonorrhoeae (OR2.4, 95%CI2.1–2.7), and concurrent anorectal N. gonorrhoeae (OR11.4, 95%CI11.0–12.3). When using any of the risk factors age, notified or oral sex as testing indicators, 98.4% of MSM would be tested, finding 99.5% of infections.

Conclusion Selective testing missed two fifth of oropharyngeal N. gonorrhoeae infections in MSM, of which more than half would be oropharyngeal-only. Using independent risk factors as testing indicator is not specific. Therefore, routine universal oropharyngeal screening in MSM is feasible and warranted, as is currently advised in the Dutch guidelines.

Disclosure No significant relationships.