Results A total of nineteen consultations were held with the various stakeholder groups. Themes were mapped to the socio-ecological model and included: 1) individual level: syphilis knowledge (e.g. risk awareness, pre- and post-exposure prevention options), 2) behavioural/biological level: substance use (e.g. in the context of party-and-play, as a coping mechanism) and syphilis testing (e.g. accessibility, opportunity to shift to an opt-out testing strategy), 3) community/relationship level: sexual networks (e.g. bridging between the gbMSM and heterosexual populations), relationships between clients and care providers (e.g. cultural safety and humility, outreach services), and relationships between public health and primary care (e.g. increasing capacity for syphilis care, integration of public health with primary care), and 4) societal/structural level: social determinants (e.g. housing), relationships with Indigenous communities (e.g. building trust, support for Indigenous-led land-based activities), and importance of using a sexual health framework (e.g. sex-positive messaging).
Conclusion Based on these identified themes, eight goals with supporting actions were prioritized in a refreshed syphilis control strategy.

Syphilis epidemiology

O07.1 TREPONEMA PALLIDUM INTRA-PATIENT HOMOGENEITY BETWEEN VARIOUS BODY LOCATIONS IN PATIENTS WITH INFECTIOUS SYPHILIS

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Syphilis, caused by Treponema pallidum subspecies pallidum (TP), is a complex multi-stage infectious disease. Systematic dissemination is known to occur within a few hours of transmission. We investigated the molecular variation of TP at various body locations within patients and assessed whether infections with multiple strains could be detected within one patient.

We included 293 men who have sex with men (MSM) suspected of syphilis at the sexually transmitted infections clinic in Amsterdam in 2018–2019; 70 (24%) had primary syphilis, 73 (25%) secondary syphilis, 86 (29%) early latent syphilis, 14 (5%) late latent syphilis and 50 (17%) did not have syphilis. Extra study samples were collected: peripheral blood, a pharyngeal and an anal swab, and a urine sample. TP-DNA was detected using a polA targeting qPCR. All positive TP samples, including ulcer swabs, were characterized using multilocus sequence typing (TP-MLST) based on sequence analysis of three genetic regions (tp0136, tp0548, tp0705).

Full TP-MLST types were obtained for the following TP-DNA positive samples: 1/22 (5%) peripheral blood, 35/75 (47%) pharynx, 10/61 (16%) anus, 23/56 (41%) urine and 50/73 (68%) ulcer. At least one TP-MLST full type was obtained from 48/70 (69%) patients in the primary, 35/73 (48%) in secondary and 10/86 (12%) in early latent stage. For all 22 patients with ≥2 TP-MLST types, the TP-MLST type was identical at the different body locations. The most prevalent TP-MLST types were 1.3.1 and 1.1.1, detected in 39/93 (42%) and 17/93 (18%) patients. Five new tp0548 and 2 new tp0136 variants were found, resulting in 6 new TP allelic profiles.

The intra-patient TP homogeneity suggests that the TP-DNA detected at the different body locations occurs from dissemination rather than from different infections from multiple partners. The TP strain diversity is similar to that in previous TP-MLST studies among MSM in Amsterdam, the Netherlands.

O07.2 THE ASSOCIATION BETWEEN A DIAGNOSIS OF SYPHILIS AND HEPATITIS B SURFACE ANTIGEN (HBSAG) POSITIVITY IN PRIMARY CARE

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Background It is estimated that mortality related to chronic hepatitis B will continue to exceed 500,000 annually until at least 2070, requiring increased efforts to improve awareness, prevention strategies, and access to diagnosis and care. Our aim was to define HBsAg testing patterns and outcomes within primary care across England.
Methods Through the Oxford-Royal College of General Practitioners Research & Surveillance Centre, we accessed data from all patients recorded at 419 primary care practices in the period January 2008-July 2019. The endpoints were proportion of individuals screened for HBsAg and proportion of HBsAg-positive individuals. Predictors were explored in multivariable models adjusted for age; gender; time registered at practice; ethnicity; socio-economic status; residence; pre-defined risk factors (injecting drug use [IDU], men who have sex with men [MSM], close contact of HBsAg-positive individual, inmate history); and diagnosis of ≥1 blood-borne or sexually transmitted infection (BB/STI) (HCV, HIV, gonorrhoea, syphilis, HPV, trichomoniasis, scabies, genital herpes).
Results Among 6,975,119 patients (51% female; median age 38 years; 60% white ethnicity; 18% London residents; 0.2% ≥1 pre-defined risk factor; 2.7% ≥1 BB/STI diagnosis), 192,639 (2.8%) had undergone HBsAg testing and 8,065 (0.12%; 95% CI 0.11–0.12) were HBsAg-positive. In adjusted analyses, predictors of HBsAg positivity were male gender, older age, non-white ethnicity, lower socio-economic status, London or other urban residence, ≥1 pre-defined risk factor, and ≥1 BB/STI diagnosis. HCV, HIV, syphilis, HPV, trichomoniasis and scabies were each associated with increased odds of HBsAg seropositivity. Syphilis and gonorrhoea had a prevalence of 0.03% and 0.02%; however, syphilis alone increased the odds of HBsAg positivity after adjusting for age, gender, time registered at practice, socio-economic status, residence, and pre-defined risk factors (adjusted OR 7.40; 95% CI 5.25–10.44; p<0.001).
Conclusions Within primary care, a diagnosis of syphilis should prompt testing for HBsAg regardless of age, gender or sexual orientation.