Background In Peru, syphilis disproportionally affects men who have sex with men (MSM) and male-to-female transgender women (TW) with prevalence rates as high as 21%. To our knowledge, there are no available data describing circulating strains of *T. pallidum* in Lima, Peru. We used the CDC subtyping scheme to identify *T. pallidum* circulating subtypes among MSM and TW from two STI clinics in Lima, Peru.

Methods A cohort of 401 MSM and TW were assessed for syphilis infection at baseline and quarterly with RPR (BD Macro-Vue, USA) and TPPA (Fujirebio, Japan) testing up to 24 months. A dacron swab was used to collect exudate from chancre-like lesions and placed into 500 µL of lysis buffer. DNA extraction was performed using QIAamp mini kit (Qiagen, Valencia, CA). Using specific primers for Tp47 region target, an aliquot of the DNA sample was amplified using conventional PCR. Subtyping of *T. pallidum* Tp47 positives was performed using detection of number of 60-bp tandem repeats in the arp gene and analysis by RFLP of 3 trp genes (TpE, G, J) according to CDC guidelines.

Results Among 401 participants, 26 presented with primary syphilis lesions at baseline or follow-up with RPR (TPPA confirmed) titers ranging from 1:2–1:64. Of those 26 total lesions, 1 (7%) of 14 tested was dark-field positive. TP DNA screening using Tp47 PCR yielded 12 (44.4%) positives. Among eight typable, four were subtypes 14d (33.3%), two 15d (16.7%), one 16d (8.3%) and one 0d (16.7%) where 0 = non-typable arp.

Conclusion *T. pallidum* subtypes 14d and 15d were the most prevalent strains in lesions obtained from MSM/TW who had chancre-like lesions in Lima, Peru. Dark field testing results and typing difficulties could be due to low bacterial load and needs to be considered in sampling methods.

Disclosure of interest statement There are no conflicts of interest.

Results As of 7 April 2015, 112 cases (60 females and 52 males) of infectious syphilis were detected, consisting of 74 and 38 confirmed and probable cases, respectively. Their ages ranged from 12 to 37 years (median: 17; inter-quartile range: 15–20.5). Community-wide screening was conducted in 2 remote Aboriginal communities with combined population coverage of 62.7% and a prevalence of 8.4% in the targeted age group (12–30 years). All positive PoCT results were confirmed by normal syphilis serology tests.

Conclusion Effective syphilis outbreak control requires up-to-date surveillance on testing and treatment as well as an outbreak response team capable of adopting the best disease control measures in a timely fashion to the different stages and needs of the outbreak. In particular, using PoCT for community screening is proving to be an extremely useful case finding method, shortening the time to treatment and thus the period of infectiousness in communities most affected. Further control of the outbreak will require inter-jurisdictional collaboration.

Disclosure of interest statement There are no conflicts of interest.