BACKGROUND
During 2012–2015, men who have sex with men (MSM) accounted for the majority of reported cases of primary and secondary (P&S) syphilis in the United States among those with known sex of partners.

We reviewed 62% (47,276 of 75,873) of P&S syphilis cases during the study period to determine the number of P&S syphilis cases reported among men who were HIV-positive, HIV-negative, and MSM of unknown HIV status.

We used data from AIDSinfo (https://aidsinfo.nih.gov) to determine the number of MSM who were diagnosed with HIV in 2015, the most recent year with available data.

We used a published method of estimating the number of MSM in each state (files at: jenga.org) and estimated the number of MSM living with diagnosed HIV infection in order to obtain an estimated number of MSM who were HIV-negative or whose HIV status was unknown.

Confidence intervals around estimates of the total number of MSM were calculated by extrapolating the estimated multiplicative factor, and randomizing from the distribution around all input parameters. Because the number of MSM living with diagnosed HIV was held fixed based on the number from AIDSinfo, confidence intervals were only available for estimates regarding MSM overall and HIV-negative or HIV-unknown MSM.

We restricted our analysis to 50 states with available data on sex and sex of partners to classify at least 70% with P&S syphilis cases as MSM, men who have sex with men, or women.

We combined national surveillance data, state-level population estimates of HIV, and estimates of the number of MSM living with diagnosed HIV infection (2015) to calculate overall and state-specific rates of P&S syphilis among MSM living with diagnosed HIV infection and among MSM who are either HIV-negative or whose HIV status is unknown, expressed as number of reported cases per 100,000 population.

To compare rates between MSM living with diagnosed HIV infection and HIV-negative and HIV-unknown MSM we calculated rate differences and rate ratios for the 54 states overall as well as for each state included in the analysis.

RESULTS
Figure 1. Rates of Reported Cases of Primary and Secondary Syphilis Among MSM Living with Diagnosed HIV Infection — 34 States, 2014

Figure 2. Rates of Reported Cases of Primary and Secondary Syphilis Among HIV-negative or HIV-unknown MSM — 34 States, 2014

Figure 3. Differences in Rates of Reported Cases of Primary and Secondary Syphilis Between MSM Living with Diagnosed HIV Infection and HIV-negative/HIV-unknown MSM — 34 States, 2014

Figure 4. Rates of Reported Cases of Primary and Secondary Syphilis Between MSM Living with Diagnosed HIV Infection and HIV-negative/HIV-unknown MSM — 34 States, 2014

CONCLUSIONS
Rates of P&S syphilis were generally higher among MSM living with diagnosed HIV infection compared to HIV-negative and HIV-unknown MSM in 2014. The magnitude and variability of rate differences and ratios varied substantially by state.

We observed larger rate differences and ratios for states with a higher proportion of MSM living with diagnosed HIV infection.

We found that rates among MSM living with HIV were more similar between states with varying proportions of MSM living with different racial/ethnic groups, which could inform targeting for HIV and STI prevention interventions.

REFERENCE

CONTACT INFO
Jeremy A. Grey, PhD, Division of STD Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, Centers for Disease Control and Prevention, 1600 Clifton Rd, Atlanta, Georgia 30333, United States (telephone: 404-332-4347; e-mail: jgrey@cdc.gov).