SUPPLEMENTAL REFERENCES

31s. Voirin, N., C. Allam, C. Charre, et al., Optimizing strategies for Chlamydia trachomatis and Neisseriagonorrhoeae screening in men who have sex with men: a modelling study*.* Clin Infect Dis, 2019.

32s. Kasaie, P., C.M. Schumacher, J.M. Jennings, et al., Gonorrhoea and chlamydia diagnosis as an entOwusu-Eduseiry point for HIV pre-exposure prophylaxis: a modelling study*.* BMJ Open, 2019. **9**(3): p. e023453.

33s. Spicknall, I.H., K.H. Mayer, S.O. Aral, et al., Assessing Uncertainty in an Anatomical Site-Specific Gonorrhea Transmission Model of Men Who Have Sex With Men*.* Sex Transm Dis, 2019. **46**(5): p. 321-328.

34s. Jenness, S.M., S.M. Goodreau, and M. Morris, EpiModel: An R Package for Mathematical Modeling of Infectious Disease over Networks*.* J Stat Softw, 2018. **84**.

35s. Goodreau, S.M., E.S. Rosenberg, S.M. Jenness, et al., Sources of racial disparities in HIV prevalence in men who have sex with men in Atlanta, GA, USA: a modelling study*.* Lancet HIV, 2017. **4**(7): p. e311-e320.

36s. Jenness, S.M., K.M. Maloney, D.K. Smith, et al., Addressing Gaps in HIV Preexposure Prophylaxis Care to Reduce Racial Disparities in HIV Incidence in the United States*.* Am J Epidemiol, 2018.

37s. Jebakumar, S.P., C. Storey, M. Lusher, et al., Value of screening for oro-pharyngeal Chlamydia trachomatis infection*.* J Clin Pathol, 1995. **48**(7): p. 658-61.

38s. Morris, S.R., J.D. Klausner, S.P. Buchbinder, et al., Prevalence and incidence of pharyngeal gonorrhea in a longitudinal sample of men who have sex with men: the EXPLORE study*.* Clin Infect Dis, 2006. **43**(10): p. 1284-9.

39s. Kelley, C.F., A.S. Vaughan, N. Luisi, et al., The Effect of High Rates of Bacterial Sexually Transmitted Infections on HIV Incidence in a Cohort of Black and White Men Who Have Sex with Men in Atlanta, Georgia*.* AIDS Res Hum Retroviruses, 2015. **31**(6): p. 587-92.

40s. Sullivan, P.S., J. Peterson, E.S. Rosenberg, et al., Understanding racial HIV/STI disparities in black and white men who have sex with men: a multilevel approach*.* PLoS One, 2014. **9**(3): p. e90514.

41s. Rosenberger, J.G., M. Reece, V. Schick, et al., Sexual behaviors and situational characteristics of most recent male-partnered sexual event among gay and bisexually identified men in the United States*.* J Sex Med, 2011. **8**(11): p. 3040-50.

42s. Tuite, A.R., M.M. Ronn, E.E. Wolf, et al., Estimated Impact of Screening on Gonorrhea Epidemiology in the United States: Insights From a Mathematical Model*.* Sex Transm Dis, 2018. **45**(11): p. 713-722.

43s. Barbee, L.A., J.C. Dombrowski, R. Kerani, et al., Effect of nucleic acid amplification testing on detection of extragenital gonorrhea and chlamydial infections in men who have sex with men sexually transmitted disease clinic patients*.* Sex Transm Dis, 2014. **41**(3): p. 168-72.

44s. Scarborough, A.P., S. Slome, L.B. Hurley, et al., Improvement of Sexually Transmitted Disease Screening Among HIV-Infected Men Who Have Sex With Men Through Implementation of a Standardized Sexual Risk Assessment Tool*.* Sex Transm Dis, 2015. **42**(10): p. 595-8.

45s. Toni, T., D. Welch, N. Strelkowa, et al., Approximate Bayesian computation scheme for parameter inference and model selection in dynamical systems*.* J R Soc Interface, 2009. **6**(31): p. 187-202.