Background Human Papillomavirus (HPV) infection is the primary cause of anal cancer. While multiple HPV infections in the anal canal may accelerate disease progression, there are no reports of behavioural factors associated with multiple anal HPV infections among men having sex with men (MSM) and men having sex with women (MSW). We hypothesised that infection with multiple HPV types in the anal canal among MSM was associated with multiple sex partners and lack of condom use for recent anal sex. For comparison, we also assessed the role of multiple partners and condom use among MSW.

Methods Genotyping for 37 HPV types was conducted on anal canal exfoliated cell specimens from men, ages 18–70, from São Paulo, Brazil; Cuernavaca, Mexico; and Tampa, Florida, USA. Specimens from the pre-enrolment visit of a 4-year prospective study were analysed. Eligibility included no history of genital warts and no current STD diagnosis including HPV. Exfoliated cell samples between the anal verge and the dentate line of the anal canal were obtained with a saline-wetted swab. A total of 191 MSM and 1407 MSW provided evaluable specimens. For multivariable analyses we used Poisson regression with a robust sandwich estimator. Association estimates were adjusted for potential confounders.

Results Multiple HPV infections were present in the anal canal of 34.7% of MSM and 4.0% of MSW. Prevalence of multiple HPV infections was stable by age group among MSW (p trend=0.65) but declined among MSM (p trend=0.009). After adjustment for potential confounders, ≥2 male anal sex partners in the past 3 months (OR 2.47, 95% CI 1.45% to 4.27% vs 0–1 men) and lack of condom use at last anal sex (OR 1.51, 95% CI 1.07% to 2.12% vs condom use) were associated with detection of multiple anal HPV infections among MSM. Among MSW, ≥2 female sex partners in the past 6 months (OR 1.81, 95% CI 1.02% to 3.21% vs 0–1 women) was associated with detection of multiple anal HPV infections while condom use at last vaginal sex was not associated with infection (no condom use: OR 0.90, 95% CI 0.51% to 1.61% vs condom use).

Conclusions These data suggest that lowering the number of sex partners may reduce infection with multiple HPV types at the anal canal among MSM and MSW. Additionally, using condoms during anal sex among MSM, even among men with multiple partners, may reduce multiple anal HPV infections at the anal canal.

Questions:alan.nyitray@moffitt.org

01-S02.04 EVIDENCE OF HPV VACCINE EFFECTIVENESS IN REDUCING GENITAL WARTS: AN ANALYSIS OF CALIFORNIA PUBLIC FAMILY PLANNING ADMINISTRATIVE CLAIMS DATA, 2007–2009

doi:10.1136/sextrans-2011-050109.10

H Bauer, G Wright, J Chow. Department of Public Health, Richmond, California, USA

Background The quadrivalent HPV vaccine, available in the US since 2006, is recommended for females age 9–26. This vaccine prevents HPV types 6 and 11, which cause 90% of genital warts (GW). Because of the rapid development of GW after infection, monitoring GW trends may provide early evidence of population level vaccine effectiveness.

Methods Trends in GW diagnoses were assessed using clinical encounter claims data from the California Family Planning Access Care and Treatment program which serves low-income females and males. Following implementation of diagnostic coding requirements, reliable data on International Classification of Diseases