one-dose. Vaccinated cohorts that include incompletely vaccinated individuals offer the opportunity to evaluate the effectiveness of reduced dosing schedules. We aimed to estimate effectiveness of one-dose of quadrivalent vaccine against high-grade squamous intraepithelial lesion (HSIL) and cervical intraepithelial neoplasia grade 2 or higher (CIN2+).

Methods Data-linkage was performed between the population-based Cervical Cancer Screening Program and immunization registries in BC. Occurrence of HSIL and CIN2+ were compared in a screening cohort of YW born between 1994–2005 who were either (a) unvaccinated; (b) completely vaccinated per-schedule (2-doses 150 days apart or 3-doses) between 9–14 years of age; or (c) vaccinated between 9–14 years of age with one-dose. Relative incidence rates (RR, (95%CI)) were calculated using Poisson regression and adjusted for birth year and age at first screening.

Results Overall, 19,496 women were unvaccinated, 14,130 were completely vaccinated (mean age at vaccination 13.3 ±1.2), and 471 vaccinated with one dose only (mean age at vaccination 13.4±1.1). We found significant protection among completely vaccinated compared to unvaccinated women. The adjusted RR for HSIL was 0.52 (0.43–0.64) and for CIN2+ 0.42 (0.31–0.57). No significant protection after one dose against HSIL and CIN2+ was observed compared with unvaccinated women, respective adjusted RR 0.69 (0.27–1.41) and 1.21 (0.43–2.86).

Conclusion In this observational study, no evidence of protection of one-dose against HSIL and CIN2+ was observed, while protection was found amongst completely vaccinated. The small sample size and the potential for administrative data biases may have impacted this preliminary analysis. This methodological approach provides a platform for further analyses, with larger numbers, to determine the potential impact of single dose HPV vaccination.

Disclosure No significant relationships.

P833

HSV-2 SEROSTATUS AND HPV INCIDENCE, PERSISTENCE, AND PRECANCEROUS LESIONS IN A COHORT OF HPV-VACCINATED WOMEN LIVING WITH HIV

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Background In understanding HPV oncogenesis, several co-factors have been proposed including co-infection with HSV-2. We assessed the relationship between HSV-2 serostatus and HPV-related outcomes in a cohort of quadrivalent HPV-vaccinated women living with HIV (WLWH).

Methods In this multi-site study of immunogenicity and efficacy of the qHPV vaccine in WLWH, three doses of qHPV vaccine were offered. Visits were at months -3, 0, 2, 6, 12, 18, 24, and annually thereafter. Participants provided clinical data and cervico-vaginal swabs for HPV DNA detection (Linear array assay) at each visit; baseline serum was tested for HSV-2 type-specific serology (Focus EIA). We used non-parametric statistics to compare the HPV-related outcomes

(including 37 high and low-risk HPV types) according to HSV-2 serostatus.

Results 151 women aged ≥16 provided baseline serum samples for HSV-2 testing. The predominant regions of origin were Canada (51%) and Africa (30%). At baseline, median age was 39 years (IQR: 34–45), median CD4 count was 500 cells/mm³ (IQR: 382–692), and 70% had an HIV viral load <50 copies/mL. Baseline seroprevalence of HSV-2 was 76.2%, and median years of follow-up was similar for HSV-2 positive (6, IQR: 5.0–7.8) and negative (6, IQR: 5.2–7.9) participants. HSV-2 positivity was significantly associated with increased age. HSV-2 seropositive and seronegative participants had similar frequencies of HPV persistence (86/115 vs 27/36, p=1), clearance of incident HPV infections (88/115 vs 26/36, p=0.8), number of HPV types detected during the study (4.5 vs 5.7, p=0.1), HSIL cytology during the study (11/115 vs 2/36, p=0.7), and CIN2+ histology ever (15/115 vs 5/36, p=1). Results were similar in sensitivity analyses in which HSV-2 seropositivity was defined as an index value ≥3.5.

Conclusion HSV-2 seropositivity was common in this cohort of WLWH in Canada, but was not associated with multiple measures of HPV incidence, persistence, and precancerous lesions.

Disclosure No significant relationships.

P834

EPIDEMIOLOGY OF HUMAN PAPILLOMAVIRUS AMONG WOMEN IN GUANGDONG, CHINA 2008–2017

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Background Human papillomavirus (HPV) infection is the major etiological factor for cervical cancer. Data on the prevalence and genotype distribution of HPV infection in Guangdong Province in southern China are limited. Our study aimed to analyze genotype-specific, age-specific prevalence and year-on-year trend of HPV detection among women in Guangdong 2008–2017.

Methods Exfoliated cervical cells were harvested from women attending gynecological department or medical examination center at Guangdong Women and Children Hospital. Twenty-one HPV subtypes were tested. Chi-squared test and the linear-by-linear association test were applied.

Results A total of 199,963 women attending gynecological department and 11,999 women attending medical examination center were included. HPV was detected in 20.16% of gynecological outpatients, with 17.67% positive for high risk (HR) HPV and 4.43% positive for low risk (LR) HPV. HPV was detected in 17.25% of women receiving physical examinations, with the prevalence of HR HPV and LR HPV being 14.88% and 4.05%, respectively. HPV prevalence significantly differed among these two populations (P<0.001). The five most prevalent genotypes were HPV 52, 16, 58, 81 and 53 among gynecological outpatients and 52, 81, 58, 53 and 16 among women receiving physical examinations. The distribution of any HPV, HR HPV, LR HPV and 9-valent HPV infections showed a bimodal pattern across age groups among both populations. A quasi-V-shaped prevalence curve was observed over the 10-year period among gynecological outpatients for any HPV, HR HPV subtype, LR HPV subtype and 9-valent HPV, while a quasi-reversed V-shaped curve was observed among

women receiving physical examinations for any HPV subtypes, HR HPV subtypes, 9-valent HPV and 4-valent HPV.

Conclusion Our study delineated the distribution and trend of type-specific HPV among both gynecological outpatients and women receiving physical examinations in Guangdong, which may provide valuable data to inform cervical cancer screening and HPV vaccination programs for women in this province.

Disclosure No significant relationships.

P835 QUANTITATIVE ORAL HPV16 AND HPV18 DETECTION IN PATIENTS ATTENDING DENTAL CLINICS

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Background The incidence of HPV-associated oropharyngeal cancer is increasing substantially, especially among men. Our goal was to assess quantitative HPV16 and HPV18 detection in oral rinses obtained in dental offices in Seattle, Washington. **Methods** We evaluated 15,313 oral rinses collected for during routine dental visits from 11/2016 to 11/2018. Multiplex Taqman qPCR was utilized to determine HPV16 and HPV18 viral load (VL).

Results In persons with a single sample, oral HPV was detected in 152(1%) persons: 127(0.83%) were HPV16 positive and 25(0.16%) were HPV18 positive. HPV16 was detected in 1.4% of men; the median age was 55 and median VL was 39.7 (range 0.1 - 589855.2 copies/mL). Only 0.4% of samples were HPV16 positive in women (median age 48, median VL 1.08, range 0.01 - 825 copies/mL). HPV18 was detected in 13(0.18%) men and 12(0.14%) women. A second oral rinse was collected in 628 persons (mean 6 months apart): 581 were HPV negative at baseline and only one became HPV16 positive at second rinse, 39 were HPV16 positive at baseline and 13 remained HPV16 positive at the second rinse, and 8 were HPV18 positive at baseline and 2 remained HPV18 positive at subsequent rinse. Patients with consecutive positive tests were all men and had higher baseline median VL (385 vs 0.90 HPV16 copies/mL; 24 vs 0.80 HPV18 copies/mL) compared to those with first positive and second negative samples.

Conclusion Oral rinse is an acceptable method of HPV testing and patients seen for routine dental care are interested in testing. Comparable to published studies, oral HPV was more frequent among men than women, especially at higher VL levels. HPV16 persistence was more common in those with high VL at baseline test. Future studies are needed to evaluate the feasibility of an effective primary and secondary screening strategy for oropharyngeal cancer using quantitative oral HPV detection.

Disclosure No significant relationships.

P836 TRENDS IN ANOGENITAL WARTS SINCE INTRODUCTION OF HUMAN PAPILLOMAVIRUS VACCINES IN CONNECTICUT, USA

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Background HPV vaccines have been available in the US since 2006 and have the potential to prevent $\geq 90\%$ of anogenital warts (AGW). Monitoring trends in AGW is important to assess progress of immunization programs.

Methods Two datasets for Connecticut (population 3.6 million) were used. Data for residents with private insurance were available for 2012–2017 from a multi-payer claims database (~1 million covered individuals per year). Data for residents with Medicaid insurance were available for 2009–2013 (~512,000 individuals per year).

Results Among privately insured women, the annual incidence rate (IR) of AGW declined from 104 to 68 per 100,000 during 2012–2017. Significant declines were observed for women aged 15–19 (p for trend=.03, average annual percent change (AAPC) -11%), 20–24 ($p<0.001$, AAPC -13%), 25–29 ($p<0.001$, AAPC -7%), and 30–34 ($p<0.01$, AAPC -2%). Similar patterns were observed among men, with an overall decline from 179 to 105 per 100,000, and $p<0.001$ for trends in each age group and AAPCs ranging from -16% to -3%. Among Medicaid-insured women, the overall IR of AGW declined from 175 to 145 per 100,000 during 2009–2013. Significant declines were observed for women up to age 29 years ($p<0.05$ and AAPCs from -13% to -3%). Rates in Medicaid-covered men did not decline in any age group.

Conclusion In Connecticut, significant and substantial declines in AGW have occurred in women during both periods (2009–2013 and 2012–2017). In men, declines occurred during 2012–2017 but not during 2009–2013, perhaps due in part to the later routine recommendation for males in 2011 compared to females in 2006. Greater declines in younger populations are consistent with HPV vaccine impact. These reductions have been achieved in a setting of moderate HPV vaccine uptake and could be further reduced with higher coverage.

Disclosure No significant relationships.

P837 HPV16/18 VACCINE: INFLUENCE ON THE SYSTEMIC AND LOCAL TH1/TH2 CYTOKINE PROFILE

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Background The immunological mechanism of the vaccines acts systemically in order to prevent a specifically infection. Although HPV-antibodies levels have been studied in serum and cervicovaginal (CVC) samples of vaccinated women, the TH1/TH2 cytokines levels has not yet been adequately characterized. In our study, we investigated the effects of the