

was incomplete. Epidemiologic monitoring of HPV in sexual networks is needed, particularly in populations with suboptimal HPV vaccine coverage.

# **P3.054 IDENTIFICATION OF HPV VACCINE-GENOTYPES IN A FEMALE STI POPULATION GROUP**

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**Background and Objectives** Women harbouring HPV genotypes are at risk to develop either genital warts or cervical dysplasia as a precursor of cervical carcinoma. Aim of the study was to evaluate the prevalence of HPV vaccine-genotypes in a female population group.

**Materials and Methods** Data were collected from 4230 female patients between February and July 2012. Material was either delivered or directly sampled and processed at the Outpatients' Centre for Diagnosis of Infectious Venero-Dermatological Diseases Vienna. Clinical diagnosis was assessed by the referring physician. Samples were collected and processed using Cytobrush DNAPAP Cervical Sampler and Papillo Check PCR.

**Results** Out of 1485 patients with "cervical dysplasia and cervical cancer precursors" (PAP III, IIID, IV and CIN I, II, III) 55.2% showed HPV high-risk positivity. Out of this group 35.6% were positive for HPV 16 and 18. Referring to vaccination cross-immunity HPV 31, 33, 45, and 52 were detected in 14.9%, 7.7%, 2.9% and 6.2% respectively.

In women with diagnosis "cervical dysplasia and cervical cancer precursors" an age-related distribution of different genotypes could be observed. HPV 16 and 18 were more often detected in young women (40%) and decreased with increasing age (24%). In contrast, HPV 45 and 56 were more often identified in older women (11.2% vs. 24%).

In specimens of individuals with genital warts HPV low-risk was detected significantly more often when samples were collected in the Outpatients' Centre than when taken by the referring physician (65.3% vs. 24.8%).

**Conclusion** HPV high-risk types 16 and 18 were detected especially in the group of young women. It can be considered that vaccination in our young female population would have prevented cervical dysplastic lesions in at least 35.6% of cases. In case of using the quadrivalent vaccine in our study cohort genital warts would have been prevented in 71.2% of cases.

# **P3.055 HERPES SIMPLEX TYPE 2 (HSV-2) INCIDENCE BY AGE AND SEX OVER FOUR AGE PERIODS TO AGE 38 YEARS IN A BIRTH COHORT**

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**Background** Here we report direct measures of HSV-2 incidence over four age periods to age 38 in the Dunedin Multidisciplinary Health and Development Study, a long-running New Zealand birth cohort.

**Methods** Information on sexual behaviour and STIs was obtained at ages 21, 26, 32 and 38. Sera were collected at these ages and tested for HSV-2 antibodies using an indirect enzyme-linked immunosorbent assay. Incidence rates for four age periods (< 21, 21–26, 26–32 and 32–38) were calculated and compared by age and sex.

**Results** The seroprevalence of HSV-2 antibodies at age 38 was 14.0% (63/451) for men and 23.7% (107/451) for women ( $p = 0.001$ ). The number becoming HSV-2 positive in each age period, and the associated incidence rate per 1000 person-years (95% CIs), are shown below.

The peak period of HSV-2 risk (after adjustment for number of sexual partners) was 21–26 for women, and 26–32 for men. It was significantly higher for women in the period 21–26.

**Conclusion** In this birth cohort HSV-2 is common, more so in women. The elevated risk for people in their twenties, that peaks later among men, is likely due to increasing prevalence among their partners. However, this did not result in continued increasing incidence into their thirties as would be expected. The most plausible explanation for the drop in incidence is that individuals' infectivity is decreasing with time, so that while prevalence among partners continues to rise, those with HSV-2 will on average have been infected for longer and be less infectious.

## **Abstract P3.055 Table 1**

Incidence of HSV-2 infection per 1,000 person-years for (a) Men and (b) Women			
First coitus to 21	Age 21–26	Age 26–32	Age 32–38
Incidence	Incidence	Incidence	Incidence
(a) 6.8 (3.7, 12.2)	(a) 7.6 (4.6, 12.4)	(a) 14.1 (10.0, 19.9)	(a) 5.1 (2.8, 9.2)
(b) 8.6 (5.1, 14.5)	(b) 19.1 (13.9, 26.3)	(b) 15.8 (11.1, 22.4)	(b) 6.8 (4.0, 11.8)

# **P3.056 PREVALENT HUMAN PAPILLOMAVIRUS IN TANZANIAN ADOLESCENT GIRLS WHO REPORT NOT HAVING PASSED SEXUAL DEBUT**

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**Objectives** The HPV vaccine is recommended for girls prior to sexual debut since it is most effective if administered prior to HPV acquisition. Little research has been conducted in high HPV-prevalence countries regarding HPV infection in girls who report not having passed sexual debut.

We present the HPV prevalence in girls enrolled in a cohort study in Mwanza, Tanzania, who report not having passed sexual debut.

**Methods** Girls aged 15–16 years who had previously attended 82 randomly selected primary schools were enrolled and underwent a face-to-face interview on socio-demographic variables, sexual behaviour and intra-vaginal practises. A nurse-assisted self-administered vaginal swab was collected. Swabs were tested for 13 high-risk (HR) and 24 low-risk (LR) HPV genotypes using the Roche LINEAR ARRAY® HPV genotype test.

**Results** Of 1555 female primary school attenders, 1177 (76%) were located, of whom 801 were aged 15 or 16 years. Of these, 628 (78%) consented to eligibility screening and 480 girls who reported not having passed sexual debut were enrolled. B-globin negative results (to ensure sample quality) were excluded ( $N = 6$ ).

HPV was detected in 40/474 (8.4%; 95% C-I: 5.9–11.0) girls. The most common genotype was HPV42, detected in 9/474 (1.9%; 95% CI: 0.9–3.7). HR genotypes were detected in 5.3% (95% CI: 3.5–7.8). Overall, 50% of girls with HPV had infection with > 1 genotype. In multivariate analysis, only intra-vaginal cleansing (practised by 21.0%) was associated with HPV detection (aOR = 3.16.95% CI: 1.46–6.85)

**Conclusion** In this cohort of adolescent Tanzanian girls, we found a high HPV prevalence prior to self-reported sexual debut, which was associated with intra-vaginal cleansing. This is likely to reflect under-reporting of sexual activity. However, vaginal HPV could be acquired during vaginal cleansing. Potential HPV transmission