vaccination, differed significantly by Indigenous status, age group, Pap cytology status or area of residence.

**Methods** We used women attending for routine Pap smear, (April 2005–February 2008), as the sampling frame with 34 sites across Australia selected to include adequate numbers of Indigenous and remote-dwelling women. The final recruitment of 2620 (mean 33, range 15–66 years) included 26% (684) indigenous. DNA extracts from Thin-Prep specimens were screened by HPV AMPLICOR (Roche) and in-house HPV FCR/ELISA, with positives genotyped by LINEAR ARRAY HPV genotyping test (Roche).

**Results** The overall prevalence of HPV infection was 39% (95% CI—56.8 to 40.6), with high risk (HR) HPV detected in 26% (95% CI—24.8 to 28.2). Single infections were detected in 17% (95% CI—15.8 to 18.7). While multiple infections were common overall at 22%, there was no difference in proportion of multiple HPV carriage between indigenous and non-indigenous (56% of HPV positive non-Indigenous women and 56% of HPV positive Indigenous women had multiple types detected). As with single infections, multiple type infections were less prevalent with increasing age. The six most common genotypes were—HPV16 (8.3%), 51 (5.1%), 55 (4.7%), 62 (4.3%), 53, 52 (3.8%). Age-specific HPV prevalence rates were similar for Indigenous and non-Indigenous women aged ≤30, but higher for Indigenous women aged 31–40, particularly for non-vaccine targeted HR-HPV genotypes. By HPV clades for this age group, indigenous women were significantly more likely to have α 7 HPV (45, 39, 59, 68 or 70 without 18) OR 1.9 (1.1 to 3.3) p=0.03) or α 5 group (HPV51, 26, 69, 82) with OR 2.1 (1.1 to 4.3) p=0.02). There was no significant association between Indigenous status and detection of HPV from the α 9 clade (31, 33, 55, 52, 58, 67), with or without HPV 16. Overall, HR-HPV prevalence increased from 21% in women with normal cytology, to 81% in those with high-grade lesions/cancer.

**Conclusions** Cross-sectional prevalence of HR-HPV was high in Australian women, with vaccine preventable genotypes observed in 13% of all women (25% in <25 year olds). Vaccination should significantly reduce vaccine related HPV infection and disease in Australian women, irrespective of indigenous status or area of residence.

**P1-S1.55** **HIGH-RISK HUMAN PAPILLOMA VIRUS (HPV) TYPES PREVALENCE IN 20–64-YEARS-OLD WOMEN; SLOVENIAN NATIONAL HPV PREVALENCE STUDY, 2010**

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**Background** To estimate prevalence of 14 high-risk human papilloma virus (HPV) types among Slovenian women screened for cervical cancer.

**Methods** In 2010, we conducted a cross-sectional study in a convenience sample of 4469 women 20–64 years old, who were eligible for a preventive cytological examination of the cervical smear according to the criteria of the Slovenian National Cervical Cancer Screening Program, presented during the study period within a network of 16 outpatient gynaecology services with a nationally wide geographical coverage and consented to participate. We used three-step HPV genotyping strategy on cervical smear specimens positive with Digene Hybrid Capture 2 HPV DNA Test and/or Abbott Real Time High Risk HPV Test. Infection with high-risk HPV types was defined as the presence of one or more of the following 14 HPV types—HPV16, HPV18, HPV31, HPV33, HPV35, HPV39, HPV43, HPV45, HPV51, HPV52, HPV56, HPV58, HPV59, HPV66 and HPV68. The overall prevalence of high-risk HPV types as well as individual high-risk HPV types was estimated with 95% CIs Statistical analyses were performed using the STATA package version 10.0.

**Results** Prevalence of cervical infection with any high-risk HPV type examined was 13.1% (CI—12.1 to 14.0), prevalence of infection with HPV16 only was 3.5% (CI—3.0 to 4.1) and prevalence of infection with HPV18 was 1.0 (CI—0.7 to 1.3). The corresponding age specific prevalence estimates decreased with age and were the highest among 20–24 years old women—26.0% (CI 22.4 to 29.5), 9.2% (CI 6.8 to 11.5) and 1.9% (CI 0.8 to 3.0), respectively. Overall prevalence of infection with any high-risk HPV type examined was the lowest among participants without evidence of cervical disease 10.8% (CI 9.9 to 11.5) and increased with the severity of cervical disease to 72.5% (CI 61.7 to 83.5) in women with low grade squamous intraepithelial lesion (LSIL) and 83.7% (CI 72.2 to 95.2) in women with high grade squamous intraepithelial lesion (HSIL). Corresponding HPV16 prevalence estimates were 2.5% (CI 2.0 to 3.0), 26.1 (CI 15.5 to 36.7) and 41.9% (CI 26.5 to 57.2), and corresponding HPV18 prevalence estimates were 0.9% (CI 0.6 to 1.2), 7.3% (CI 1.0 to 15.5) and 7.0% (CI 0.0 to 14.9).

**Conclusions** Our results provide baseline high-risk HPV types prevalence estimates and will inform future monitoring of the impact of HPV vaccination program, including possible replacement of non-vaccine HPV types and design of effective cervical cancer screening strategies.
However, significant associations were observed in MSM with anal HPV 16 (with coinfection—AOR, 10.94, 95% CI, 1.18 to 101.68; without—AOR, 4.96, 95% CI, 1.40 to 17.57).

**Conclusion** We found type-specific associations of HPV 6 and 16 seropositivity with prevalent anal HPV infection, but not with prevalent genital HPV infection alone. Anal HPV 6 infection was associated with seropositivity in both MSW and MSM, while anal HPV 16 infection was only associated with seropositivity in MSM. Our data suggest that, in men, anal HPV infection may be more efficient than genital HPV infection in inducing immune responses. This may have relevance for protective immunity or the lack thereof, conferred by natural infection.

**Epidemiology poster session 1: STI trends: Mycoplasma genitalium**

**THE INCIDENCE OF MYCOPLASMA GENITALIUM IN A COHORT OF YOUNG AUSTRALIAN WOMEN**

**Methods** Women aged 16–25 years were recruited from sexual health clinics (SHC) and general practice clinics (GP) in South-Eastern Australia and consented to participate in a 12-month study providing vaginal swabs through the mail. Women were tested at 6-monthly intervals for chlamydia and Mg.

**Results** Overall, 1116 women were recruited from 29 clinics, with 79% of women retained at the conclusion of the study. The prevalence of Mg at recruitment was 2.4% (95% CI 1.5 to 3.3). Increased numbers of sexual partners was strongly associated with Mg load or measured markers of inflammation. The growing evidence for protective immunity or the lack thereof, conferred by natural infection.

**Conclusion** Mg is common in young Australian women, and consistent with international studies, Mg was less prevalent than chlamydia.

**Epidemiology poster session 2: Population: Commercial sex worker**

**PREVALENCE OF HIV AND SEXUALLY TRANSMITTED INFECTIONS AMONG CLIENTS OF FEMALE SEX WORKERS IN KARNATAKA, SOUTH INDIA**

**Methods** Data were from a cross-sectional biological and behavioural survey of FSW clients from six districts in Karnataka State, India. The prevalence of HIV, syphilis, herpes simplex virus type 2 (HSV-2), chlamydia (CT) and gonorrhoea (GC) among clients was