Parents belonging to the Muslim religion (0.54; CI: 0.37, 0.80) had lower odds of vaccine of HPV vaccine acceptance.
Conclusion The majority of parents of school-going adolescent girls in Mysore found HPV immunisation acceptable. Further research is needed to understand the issues associated with HPV vaccination in different religious groups in India.

019.5 ASSESSING THE EFFECTIVENESS OF THE HUMAN PAPILLOMAVIRUS (HPV) VACCINATION PROGRAMME IN VICTORIA, AUSTRALIA

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[1]**S M Garland**, [2]S O Osborne, [3]E J Young, [4]J M L Brotherton, [3]S N Tabrizi, [4]D M Gertig, [3]Y Jayasinghe, on behalf of the VACCINE study group. *[1]The Royal Women's Hospital, Murdoch Childrens Research Institute, Parkville, Australia; [2]The Royal Women's Hospital, Murdoch Childrens Research Institute, University of Melbourne, Parkville, Australia; [3]Murdoch Childrens Research Institute, Parkville, Australia; [4]University of Melbourne, Victorian Cytology Service, Parkville, Australia*

Background Quadrivalent HPV vaccination has been available in Australia through the National HPV Vaccination Program since 2007. The VACCINE study aims to evaluate the effectiveness of the programme by assessing the prevalence of vaccine targeted HPV genotypes (HPV 6, 11, 16 and 18). We aim to detect any decrease in prevalence of vaccine-targeted HPV genotypes amongst young women in vaccine eligible cohorts and to independently measure vaccine coverage in young Victorian women.
Methods Young Victorian women aged 18–25 are recruited using the social networking site Facebook. Participants complete an online questionnaire and those sexually active are asked to provide a self-collected vaginal swab. Swabs are genotyped using a Linear Array HPV genotyping test (Roche Diagnostics).
Results To date, 623 (of 1570) females have been recruited into the study and 477 participants have completed the study. 71% (440) were sexually active and of these women 373/440 (85%) provided a self-collected swab, of which 75% were negative for HPV. Of the 95 cases positive for HPV, only 6 cases of HPV 16 have been recorded, and no cases of HPV 6, 11 or 18 have been identified. The prevalence of HPV16 (1.6%) is significantly lower than that detected from pre-vaccine age matched Victorian women cervical specimens (9.4%) ($\chi^2_{(1)} = 18.3$, $p < 0.001$). Based on self-reported vaccination status, 85% of women aged 18–21 years old in our sample have received at least one dose of the HPV vaccine, compared with 83% for women aged 22–25. Cross protection against HPV 31 is also being seen (0.5% versus 5.6%, $\chi^2_{(1)} = 14.2$, $p < 0.001$).
Conclusions Preliminary data from the VACCINE study suggest a significant decline in the prevalence of vaccine-targeted HPV genotypes. These results support the hypothesis that the HPV vaccine programme is effective in reducing HPV genotypes 6, 11, 16 and 18 amongst populations offered the vaccine.

019.6 USE OF SURFACTANT VESICLES AS A POTENTIAL GONOCOCCAL VACCINE DELIVERY SYSTEM TO GENERATE ANTIBODY AGAINST NEISSERIAL LIPOOLIGOSACCHARIDE

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[1]**D Stein**, [1]L Zimmerman, [2]J Park, [2]L Stocker, [2]P DeShong. *[1]University of Maryland, Department of Cell Biology and Molecular Genetics, College Park, MD, United States; [2]University of Maryland, Department of Chemistry and Biochemistry, College Park, MD, United States*

Background To date, no one has been able to exploit the immunological potential of neisserial lipooligosaccharide (LOS) as a vaccine candidate.
Methods We have developed a glycoconjugate vaccine (TRIAD) that contains native LOS derived from *Neisseria gonorrhoeae* F62) ΔlgtD (a strain that produces lacto-N-neotetraose LOS and a peptide (PADRE) that possesses the ability to bind to a large number of HLA class II molecules, inserted into a surfactant vesicle. TRIAD is a catanionic surfactant vesicle formulation and the resulting vesicle is stable at room temperature for years, unlike a typical liposome. TRIAD is so robust that it can be autoclaved without any appreciable loss of structural integrity.
Results Using TRIAD that contained LOS and PADRE at a ratio of 10:1, and immunising with 2 μg of LOS equivalent, we were able to demonstrate that our vaccine induces a high titer anti-LOS antibody response, with the majority of the elicited antibody being IgG. Intraperitoneal immunisation of mice with our vaccine construct produced no observable adverse effects in mice, while intraperitoneal immunisation with equivalent amounts of purified LOS induced significant adverse effects.
Conclusions Our surfactant vesicle platform possesses all of the advantages seen with traditional liposome formulations, without any of the inherent problems associated with liposome-mediated vaccines. This vaccine platform readily lends itself to further modifications in that it is possible to include additional neisserial proteins into the vaccine via a novel whole cell extraction protocol. We believe that this will allow us to generate a universal vaccine able to protect against all serotypes of *N. meningitidis*.

0.20 - Sexual partnerships and networks

020.1 TWO-MODE ANALYSIS OF HIV, HCV AND RISK BEHAVIOURS: A PLACE-BASED ANALYSIS OF MOST AT-RISK POPULATIONS IN WINNIPEG, CANADA

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[1]**S Y Shaw**, [1]C Green, [2]J L Wylie. *[1]University of Manitoba, Winnipeg, MB, Canada; [2]Cadham Provincial Laboratory, Winnipeg, MB, Canada*

Background The HIV epidemic has shown a considerable amount of heterogeneity, complicating the design and placement of prevention, intervention and treatment programmes. Place-based analyses providing specific information on pathogen prevalence, risk behaviours and other micro-level behaviours can help to target public health responses.
Methods Data were from a cross-sectional survey of most-at-risk populations (MARPs) from Winnipeg, Canada. Respondents were recruited through respondent-driven sampling, and biological, behavioural and egocentric network data were collected. Respondents named locations where they frequented and where they engaged in risk behaviours, including the use of crack cocaine, injectable and non-injectable drug use, and solvents; and either seeking sex work clients or sex workers. Locations were geo-coded up to Statistics Canada dissemination areas. Two-mode network visualisation and centrality, degree, and betweenness measures were generated using UciNet (V.6).
Results From a sample size of 600, nine locations were named by 10 or more respondents. The following results pertain only to these nine locations (N: 231). Locations corresponded to three "hot spots" in Winnipeg's inner and outer core areas. Across the sample, HIV and HCV prevalence was 9.8% and 51.5%, respectively. Prevalence varied considerably by location, ranging from 0% to 15% for HIV and 20% to 70% for HCV. Degree ranged from 0.054 to 0.330, closeness from 0.178 to 0.411 and betweenness from 0.054 to 0.521. No association between prevalence of HIV and HCV and network metrics was found. Substantial heterogeneity in pathogen prevalence and risk behaviour was observed by location, while pathogen, risk and mixing characteristics of populations bridging the nine locations were made apparent by two-mode visualisation.
Conclusion Two-mode analysis of egocentric network data revealed geographic clustering of risk behaviours, while at the same