

P347 DOES HPV VACCINE INITIATION INFLUENCE SEXUAL BEHAVIOUR? FINDINGS FROM THE SECOND AUSTRALIAN STUDY OF HEALTH AND RELATIONSHIPS

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Background In 2007, a national school-based vaccination program for human papillomavirus (HPV) among 12–13-year-olds was introduced in Australia, as well as a catch-up program for women aged ≤26. We examined associations between vaccine initiation and sexual activity to address concerns among some members of society that vaccination implies approval for sexual activity and could lead to early or risky sexual behaviour.

Methods Computer-assisted telephone interviews were conducted with a random sample of the Australian population aged 16–69 years during 2012–2013. Participants were surveyed about their sexual behaviour and HPV vaccine initiation. We restricted to women aged 16–20 years at the time of interview who would have been eligible for school-based vaccination. Responses were weighted based on study design, location, and the age-sex distribution of Australia. We used Pearson's chi-square tests and logistic regression to look at vaccine initiation and sexual behaviour, and report results as odds ratios (OR) and 95% Confidence Intervals (CI).

Results Among 920 women aged 16–20, 76.7% had initiated the vaccine. Proportions were higher among women born in Australia (81.2% versus 49.2% oversea-born, $p < 0.001$), and who reported any sexual experience (84.7% versus 69.9% with no sexual experience; $p < 0.01$). After adjusting for age, there was no association between vaccine initiation and any sexual activity before 16 years (early sexual behaviour) (OR=1.40; 95% CI: 0.63–3.13; $p = 0.41$), or ever being diagnosed with an STI (OR=1.73; 95% CI: 0.38–7.86; $p = 0.48$). Those initiating the vaccine were more likely to have had more than one partner in the last year (OR=2.31; 95% CI: 1.09–4.88; $p = 0.03$) but this effect was attenuated after adjusting for age, rurality, religiosity, education, overseas-born, and income level (OR=1.69; 95% CI: 0.74–3.86; $p = 0.21$).

Conclusion Differences in sexual activity between vaccinated and unvaccinated women were explained by confounding by characteristics such as age, overseas-born and income level. We found no evidence of an independent association between initiating the HPV vaccine and high-risk or early sexual behaviour.

Disclosure No significant relationships.

P348 INTRACLUSTER CORRELATIONS OF STI AND SEXUAL BEHAVIOUR OUTCOMES: ESTIMATES FROM A COMMUNITY-BASED CLUSTER RCT

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Background Interventions to prevent or manage sexually transmitted infections (STI) are often evaluated at the clinic or community level. Cluster randomised controlled trials (cluster-RCT) need to take into account similarities between characteristics within clusters, increasing the required sample size. However, information about intracluster correlation coefficients (ICC) is rarely known at the design stage. We estimated ICCs for four STI and sexual behaviour variables at the levels of clinic and postcode.

Methods Data were collected during the Australian Chlamydia Control Effectiveness Pilot (ACCEPT), a cluster-RCT of a chlamydia testing intervention in women and men aged 16–29 years attending general practice. ICCs were calculated for: chlamydia prevalence, proportion with a chlamydia test in the last 12 months, condom use last sex and concurrent sex partners. Population-averaged unadjusted and covariate-adjusted logistic regression models with exchangeable correlation matrix were fitted to the clustered data, estimated by generalised estimating equations. ICCs were calculated separately at the levels of clinic and postcode.

Results The trial was conducted in 130 clinics in 54 Australian postcodes. For the prevalence outcome, the median cluster size was 25 for clinic and 74 for postcode. ICCs were larger at clinic than postcode level for all outcomes. ICC at the clinic and postcode level were, respectively: chlamydia prevalence 0.0044 and 0.0026; chlamydia testing 0.0105 and 0.0074; condom use last sex 0.0032 and 0.0010; and concurrent partners 0.0007 and 0.0006. In general, adjustment for individual- and postcode-level characteristics reduced ICCs. The design effect for chlamydia prevalence accounting for clustering was 1.35 and 1.21 using the clinic or postcode cluster level respectively.

Conclusion For STI and sexual behavioural outcomes in ACCEPT, the size of the ICC depended on the level of cluster randomisation. By publishing these ICC estimates, STI researchers can undertake more robust sample size calculations for future cluster-RCTs.

Disclosure No significant relationships.

P349 SEXUAL BEHAVIOR AND STI RISK AMONG MSM AND TRANSGENDER WOMEN PARTICIPATING IN A STUDY OF TIMING OF ANTIRETROVIRAL THERAPY

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Background We assessed sexual behavior and sexually transmitted disease risk among men who have sex with men and transgender women participating in *Sabes*, a study of an expanded treatment as prevention strategy focused on early diagnosis and treatment of HIV infection.

Methods *Sabes* participants were tested monthly for HIV to identify acute or early infections, and HIV-positive participants were randomized to receive ART immediately (Immediate) or after 24 weeks (Deferred) during a 48-week follow-up period. Sexual behavior was assessed via computer-based questionnaire at randomization (baseline) and every 12 weeks thereafter. Participants were tested for urethral and rectal chlamydia and gonorrhea (via nucleic acid amplification tests) and for syphilis