

HUMAN PAPILLOMAVIRUS PREVALENCE AMONG UNVACCINATED AND VACCINATED AUSTRALIAN MEN AGED 18–35 YEARS, IN 2015–2018 BY SEXUAL PREFERENCE

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Background:

Australia introduced a national HPV vaccination program for girls in 2007 and boys in 2013, achieving high coverage in both groups. We assessed HPV prevalence among heterosexuals and gay, bisexual, and other men who have sex with men (GBM) aged 18–35. We examined risk factors for HPV detection among unvaccinated men and explored effects of the national program

Methods:

Men recruited through health services and online between 2015–2018 provided a self-collected penile (heterosexual men) or intra-anal swab (GBM) for HPV testing (Anyplex II HPV28) and completed a questionnaire. HPV vaccination status was confirmed with the National Register. Adjusted odds ratios (ORs) and 95% confidence intervals (CI) were calculated among unvaccinated men, and patterns of infection were examined by age-groups and vaccination status.

Results:

Overall, 1,606 men (median age 27 years; IQR [IQR 23–30]) were included, 226 (14.1%) were vaccinated (ranging from 30.5% [95% CI: 24.9–36.9] at 18–21 years to 15.9% [11.7–21.3] at 30–35 years) and remaining 1,356 (84.4%) unvaccinated.

Among 962 heterosexual men, prevalence of quadrivalent HPV types (6, 11, 16, 18) was 10.1% (8.3–12.3) in unvaccinated (882/962) and 10% (5.1–18.8) in vaccinated men (80/962). Prevalence was lowest in the youngest age groups regardless of vaccination status. Among GBM, prevalence of quadrivalent HPV types was 40.5% (36.2–45) in unvaccinated men (474/620) and 30.1% (23.2–38.1) in vaccinated men (146/620). HPV prevalence was high regardless of age in unvaccinated GBM while among the vaccinated groups, prevalence was lowest in the youngest age groups.

Conclusion:

Results among heterosexual men suggests a powerful herd protection from the female HPV vaccine program. The patterns among unvaccinated GBM are consistent with the absence of herd effects. Our data demonstrates the importance of universal vaccination to ensure GBM receive the same benefits as heterosexual men.