Protection of anogenital warts conferred by HPV vaccination in immunocompetent girls

Population: Immunocompetent girls
Intervention: HPV vaccination
Comparison: Placebo/ no vaccination
Outcome: Anogenital warts

What is the scientific evidence to support administration of the currently licensed quadrivalent HPV vaccine* to immunocompetent girls to substantially reduce their risk of developing anogenital warts later in life?

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<td>4/ RCT 1/ observational1</td>
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Factors decreasing confidence
- Limitation in study design: None serious
- Inconsistency: None serious
- Indirectness: None serious
- Imprecision: None serious
- Publication bias: None serious

Factors increasing confidence
- Large effect: Not applicable
- Dose-response: Not applicable
- Antagonistic bias and confounding: Not applicable

Final numerical rating of quality of evidence: 4

Summary of Findings
- Statement on quality of evidence: We are very confident that the true effect lies close to that of the estimate of effect on health outcome.

Conclusion: We are highly confident that administration of quadrivalent HPV vaccine to immunocompetent girls to prevents the development of anogenital warts later in life.

*The bivalent HPV vaccine is not designed to protect against anogenital warts

1 Garland SM et al evaluated quadrivalent vaccine efficacy against anogenital warts in 2261 females and 2279 controls aged 16-24 years at enrolment. Among females naive to HPV 6 or HPV 11 through to 1 month following the 3rd vaccine dose, protection against such lesions due to the HPV type or types for which the subject was naive at enrolment was 100% (95% CI 94-100%) after a mean follow-up of 3 years. In an analysis of two international RCTs including a study population of 17,622 females aged 16-26, Dillner J et al estimated 99% (96% CI 95-100%) vaccine efficacy against HPV 6/11/16/18-related anogenital warts in the per-protocol group who had received 3 doses of the vaccine and were tested HPV negative when initiating the vaccination series, Munoz et al confirmed these findings in a subset of participants from these trials and estimated 96.4% (95%CI 92.1-98.8%) vaccine efficacy in preventing anogenital warts. Evidence of protection against genital warts was confirmed by large postlicensure studies. The findings from these RCTs were confirmed in an observational study: Ali et al. observed large declines in the proportions of under 21 year old (92.6%) and 21-30 year old (72.6%) women diagnosed as having genital warts in the vaccination period, from 11.5% in 2007 to 0.85% in 2011 (P<0.001) and from 11.3% in 2007 to 3.1% in 2011 (P<0.001), respectively. Ferris et al demonstrated persisting long-term anti-HPV6/11/16/18 responses for at least 8 years post-vaccination. Among 429 subjects who received HPV4 vaccine at a mean age of 12, none developed HPV6/11/16/18-related disease or persistent infection of ≥12 months duration.
References


