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## Quadrivalent and nonavalent HPV vaccine: Ovarian safety research

Deirdre Little<sup>1, 2</sup> <sup>1</sup>Bellinger River District Hospital, Australia <sup>2</sup>North Bellingen Medical Services, Australia

Tuman papillomavirus (HPV) vaccination may prevent up to 90% of oncogenic HPV infection. Quadrivalent and 9-valent Human papillomavirus (HPV) vaccination may prevent up to 2000 of one open and the paparito of open Australia, which is now mostly confined to women not accessing regular screening. HPV vaccine marketing, licensing and advisory body statements of ovarian safety have followed case series of premature ovarian insufficiency (POI) in vaccine recipients. What evidence supports these statements? Adolescent ovarian safety research post quadrivalent and nonavalent vaccines were reviewed up to 2018. Controlled adolescent safety studies, studies reporting on menstrual function and studies addressing fertility concerns were analysed for design, internal validity, generalizability and outcome. No research has established ovarian safety post HPV vaccination. Two observational studies report 48% and 45% of young women experience irregular menses post vaccine. Research claiming to evidence reproductive safety in response to public concern about fertility effects of HPV vaccination was invalidated by correction for irregular menses, the most frequent presenting sign in POI. Existing vaccine ovarian safety statements are unevidenced. Possible autoimmune and toxicological vaccine effects have been postulated. Currently available post-marketing experience indicates a pressing need to investigate ovarian health after HPV vaccination. In the context of currently advocated long-acting reversible and other hormonal contraception, detection of an ovarian safety problem will be delayed until seeking pregnancy. HPV vaccine ovarian safety statements may confound vaccine adverse event reporting efficiency, reduce vaccine safety datalink effectiveness, delay ovarian safety research and contribute to reduced public vaccine confidence.

## Biography

Deirdre Little Is a primary care medical practitioner in NSW Australia, and Visiting Medical Officer at Bellinger River District Hospital, NSW. Published work includes: Premature ovarian failure 3 years after menarche in a 16-year-old girl following human papillomavirus vaccination BMJ Case Reports Little DT, Ward HRG, 2012;10.1136/ bcr-2012-006879; Little DT and Ward HRG Adolescent Premature Ovarian Insufficiency Following Human Papillomavirus Vaccination: A Case Series seen in General Practice, Journal of Investigative medicine High Impact Case Reports Oct 2014; Brighton Collaboration Vaccine Safety Quarterly 2/2014 author report; Little DT (2017) Quadrivalent Human Papillomavirus Vaccine and the Young Ovary: Review of Safety Research Following Two Case Series of Premature Ovarian Insufficiency. J Immunol Infect Dis 4(1): 101;.

dlittle@skymesh.com.au