HPV Vaccine Safety & Effectiveness 2006 - 2018
September
87. Long-Term Antibody Response to Human Papillomavirus Vaccines: up to 12 Years Follow-Up in the Finnish Maternity Cohort Hanna Artemchuk, Tiina Eriksson, Mario Poljak, Heljä-Marja Surcel, Joakim Dillner, Matti Lehtinen, Helena Faust The Journal of Infectious Diseases, jiy545, https://doi.org/10.1093/infdis/jiy545
2018

June
85. “The Impact of the National HPV Vaccination Program in England Using the Bivalent HPV Vaccine: Surveillance of Type-Specific HPV in Young Females, 2010–2016”
David Mesher, Kavita Panwar, Sara L. Thomas, Claire Edmundson, Yoon Hong Choi, Simon Beddows Kate Soldan The Journal of Infectious Diseases, jiy249, https://doi.org/10.1093/infdis/jiy249

July
86. “Substantial Decline in Prevalence of Vaccine-Type and Nonvaccine-Type Human Papillomavirus (HPV) in Vaccinated and Unvaccinated Girls 5 Years After Implementing HPV Vaccine in Norway”
Berit Feiring, Ida Laake, Irene Kraus Christiansen, Mona Hansen, Jeanette Stålcrantz, Ole Herman Ambur, Per Magnus, Christine Monceyron Jonassen, Lill Trogstad The Journal of Infectious Diseases, jiy432, https://doi.org/10.1093/infdis/jiy432
2018

May

January

February
2017

December
80. World Health Organization released an information sheet – Observed rate of vaccine reactions human papilloma virus vaccine
http://www.who.int/vaccine_safety/initiative/tools/HPV_vaccine_rates_information_sheet_1217.pdf?ua=1
December
Drug Saf  https://doi.org/10.1007/s40264-017-0625-z

November
78. 4-Valent Human Papillomavirus (4vHPV) Vaccine in Preadolescents and Adolescents After 10 Years
October
77. Human papillomavirus vaccination of adult women and risk of autoimmune and neurological diseases
Hviid, A, Svanström, H, Scheller, N. M., Grönlund, O., Pasternak, B., Arnheim-Dahlström, L.

76. A 12-Year Follow-up on the Long-Term Effectiveness of the Quadrivalent Human Papillomavirus Vaccine in 4 Nordic Countries
Susanne K Kjaer Mari Nygård Joakim Dillner J Brooke Marshall David Radley Meng Li Christian Munk Bo T Hansen Lara G Sigurdardottir Maria Hortlund
Clinical Infectious Diseases, cix797, https://doi.org/10.1093/cid/cix797
July

75. The World Health Organisation (WHO) has again reported in July 2017 that HPV vaccines are considered to be extremely safe. The World Health Organization (WHO) Global Advisory Committee for Vaccine Safety (GACVS) has reviewed the evidence on the safety of Gardasil vaccine in 2007, 2008, 2009, 2013, 2014 and 2015. WHO has never reported safety concerns with HPV vaccines.

http://www.who.int/vaccine_safety/committee/topics/hpv/en/

74. A large Norwegian study aimed to ascertain if any association existed between HPV vaccination and chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME). Over 176,000 girls who were eligible for HPV vaccination were included in the study. No indication of increased risk of CFS/ME following HPV vaccination was observed among girls who were vaccinated.

July
73. In Scotland research has shown there has been a 90% fall in HPV infections in vaccinated girls which is even better than expected. In Scotland 90% of girls have accepted HPV vaccination.

June
72. A British study based upon two large population-based probability sample surveys found that fewer women, aged 18 to 20 years who were vaccinated against HPV 16/18 tested positive for HPV 16/18 (5.8% versus 11.2% in those unvaccinated).
May
71. The World Health Organization updated their position statement on HPV vaccines. They state that adverse events following HPV vaccination are generally non-serious and of short duration. Data from all sources continue to be reassuring regarding the safety profile of all 3 HPV vaccines in use. Concerns have been raised about complex regional pain syndrome (CRPS) and postural orthostatic tachycardia syndrome (POTS) following HPV vaccination. Despite the difficulties in diagnosing both disorders, reviews of pre- and post-licensure data have provided no evidence that these syndromes are a direct effect of the HPV vaccines. The WHO Global Advisory Committee for Vaccine Safety has stated that policy decisions based on weak evidence, leading to lack of use of safe and effective vaccines, can result in significant harm. 
http://apps.who.int/iris/bitstream/10665/255353/1/WER9219.pdf?ua=1

March
70. An English study examined girls aged 11 to 20 years who were admitted to hospital with Guillain-Barre syndrome. The study found no evidence of an increased risk of GBS in the first 3, 6 or 12 months following a dose of HPV vaccination.
March
69. A French based study of over 3,700 sexually active young women found that the prevalence of HPV strains contained in vaccines (vaccine type HPV prevalence) was significantly lower among confirmed vaccinated women than among those women who were unvaccinated. This study showed the effectiveness of HPV prophylactic vaccines at an individual level. [https://www.ncbi.nlm.nih.gov/pubmed/28011911](https://www.ncbi.nlm.nih.gov/pubmed/28011911)


February
69. A French based follow-up study assessed if any association existed between HPV vaccine exposure and autoimmune diseases in French adolescents and young adults in the first 6 and a half years of vaccination in France. They found that exposure to HPV vaccines was not associated with an increased risk of autoimmune diseases, specifically central demyelination/multiple sclerosis, connective tissue disease, type 1 diabetes, autoimmune thyroiditis or idiopathic thrombocytopenic purpura. [https://www.ncbi.nlm.nih.gov/pubmed/28190705](https://www.ncbi.nlm.nih.gov/pubmed/28190705)
December

67. A US study examined a group of sexually active, inner-city adolescent women receiving the 3-dose quadrivalent vaccine. Compared to unvaccinated women, those who were vaccinated had significantly lower incidence of cervical infection with HPV6/11/16/18. Among adolescents immunized at 15 years of age or older, a longer time to complete the 3-dose schedule was associated with an increased risk of anogenital HPV6/11/16/18 infection and an increased incidence of associated cervical cytological abnormalities.


66. A study examined if any potential risk of new onset autoimmune disease in women aged 9 to 25 years in the United Kingdom after administration of the AS04-HPV 16/18 vaccine, existed. This found no evidence of an increased risk of autoimmune disease in women aged 9 to 25 years after vaccination.

November

65. A literature review focused upon 13 randomized controlled trials which compared HPV vaccines to controls. Of the 11,189 people in seven publications reporting cumulative, all-type adverse events, the vaccinated group was higher than the control group, although the most common adverse events were injection-sire reactions. There was no significant difference in systemic symptoms. The authors concluded with the finding that the vaccination was a safe preventative measure for both men and women. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5116857/

October

64. A large clinical trial recruited women from Europe, North and Latin Americas and the Asia Pacific region. Women older than 25 years who were vaccinated with the HPV 16/18 vaccine were protected against infections, cytological cervical abnormalities and lesions associated with HPV 16/18 and cervical intraepithelial neoplasia as well as infection with non-vaccine types HPV 31 and 45 over a seven year period. http://www.thelancet.com/journals/laninf/article/PIIS1473-3099(16)30120-7/abstract
October
63. CDC and American Advisory Committee on Immunization Practices recommend a two dose HPV vaccine and states this schedule would ensure more Americans are protected from cancer.
http://www.cdc.gov/media/releases/2016/p1020-hpv-shots.html

September
62. Danish study finds that compared to controls, women reporting severe adverse reactions to HPV vaccine had increased care-seeking in the 2 years before receiving the first HPV vaccine.

August
61. Irish Cancer Society Decoding Cancer public talks entitled: ‘The HPV Vaccine – Warts and all’ were held in Galway on August 23rd and in Cork, August on 24th. The talks outlined the significance of HPV as a cause of cancer and the facts about the safety and effectiveness of the vaccine in cervical and other cancer prevention.
https://www.cancer.ie/events/decoding-cancer-hpv-vaccine-%E2%80%93-warts-and-all-galway
2016

**August**

**July**
59. Swedish study finds Gardasil vaccination was not associated with increased incidence of new-onset autoimmune disease in girls and women with pre-existing autoimmune disease. Gardasil vaccination was associated with a slightly reduced risk (0.77, 95% CI 0.65-0.93) of new onset autoimmune disease. [https://www.ncbi.nlm.nih.gov/labs/articles/27478093/](https://www.ncbi.nlm.nih.gov/labs/articles/27478093/)

May
57. Irish Cancer Society states that a combination of a HPV vaccination and cervical screening programme, has the potential to reduce the incidence of cervical cancers by 90%. The Society also states that the HPV Vaccine is safe and that there is no scientific evidence to suggest otherwise.
https://www.cancer.ie/reduce-your-risk/healthy-lifestyle/europeancode/hpv-vaccine

56. Australian review finds that implementation of HPV vaccination programmes resulted in reductions of HPV 6, 11,16 & 18 infection (90%), genital warts (90%), low-grade cytological cervical abnormalities (45%) and high-grade histologically proven cervical abnormalities (85%). Ensuring broad coverage of appropriate populations can provide a major advancement in global public health.
http://cid.oxfordjournals.org/content/early/2016/06/14/cid.ciw354.full

April
55. American Society of Clinical Oncology strongly recommends the need to increase the proportion of adolescent boys and girls receiving the HPV vaccine which could lead to complete eradication of HPV-related cancers in men and women.
January

54. European Commission endorses the conclusion of the EMA stating that there is no need to change the way HPV vaccines are used or to amend the product information. This final outcome by the Commission is now binding in all member states.

https://www.kildarestreet.com/wrans/?id=2016-10-26a.374

53. US National Cancer Institute (NCI) designated Cancer Centers declare that low uptake rates of HPV vaccination constituted a serious public health threat. They further state that HPV vaccination represents a rare opportunity to prevent many cases of cancer and save lives.


52. EMA concludes that there is zero evidence that HPV vaccines cause CRPS or POTS or chronic fatigue like conditions. They conclude that the benefits of HPV vaccines continue to outweigh their risks and that use of these vaccines is expected to prevent many cases of cervical cancer as well as various other cancers and conditions caused by HPV.

European Medicines Agency HPV vaccines: EMA confirms evidence does not support that they cause CRPS or POTS 12 January 2016

http://www.ema.europa.eu/ema/index.jsp%3Fcurl%3Dpages/medicines/human/referrals/Human_papillomavirus_vaccines/human_referral_prac_000053.jsp%26mid%3DWC0b01ac05805c516f
December
51. WHO reports there are no safety issues with the use of HPV vaccines. *Global Advisory Committee on Vaccine safety Statement on Safety of HPV vaccines 17 December 2015*  

September
50. Multinational study finds no increase in the incidence of serious adverse events associated with HPV vaccination compared with background rates.  

August
49. Australian review concludes that HPV vaccines are highly efficacious (>90%) at preventing infection and related cervical intraepithelial neoplasia and has proven efficacy in both sexes and against HPV16/18/6/11 related vulvar, vaginal, penile and anal intraepithelial neoplasia and genital warts. There are no safety concerns.  
Brotherton J HPV prophylactic vaccines: lessons learned from 10 years experience *Future Virology* August 2015 ,Vol. 10, No. 8, Pages 999-1009  
August
48. Japanese Society of Obstetrics and Gynecology demands the resumption of recommendations for HPV vaccination with the aim of eradicating cervical cancer. 
http://www.jsog.or.jp/english/declaration_20150829.html

47. Nordic region study finds that Gardasil provides protection for at least 9 years following vaccination. 

June
46. EMA approves Gardasil 9 vaccine for use in males and females from nine years to protect against precancerous lesions (growths) and cancers in the cervix, vulva or vagina and anus and genital warts caused by nine types of the human papillomavirus (HPV types 6, 11, 16, 18, 31, 33, 45, 52 and 58). 

May
45. Australian study confirms there was a decline in the diagnosis of genital warts 7 years following introduction of the national Gardasil vaccination programme 
http://sti.bmj.com/content/91/3/214.full.pdf+html
January

44. A US study finds no safety concerns for pregnant women who received Gardasil, or for their babies. *Gardasil is not recommended during pregnancy. However, some women may receive the Gardasil shot before realising they are pregnant.*

43. Australian study confirms that the introduction of the national Gardasil vaccination Programme led to a reduction in the diagnoses of genital warts nationally among females (89.9%) and had indirect benefits to males (38.3%).
http://jid.oxfordjournals.org/content/211/1/91.full.pdf+html

42. Scandinavian study finds vaccinated girls were no more likely than unvaccinated girls to develop multiple sclerosis (MS) or other similar diseases.
http://jamanetwork.com/journals/jama/fullarticle/2088853
December
41. Multinational study finds that after 4 years follow up, Gardasil is protective against HPV infections and cervical abnormalities associated with HPV 16/18 and infections with the non-vaccine HPV types 31 and 45.

40. FDA approves Gardasil 9 for the prevention of cervical, vulvar, vaginal and anal cancers caused by HPV types 16, 18, 31, 33, 45, 52 and 58, and for the prevention of genital warts caused by HPV types 6 or 11. FDA states that Gardasil 9 has the potential to prevent approximately 90% of cervical, vulvar, vaginal and anal cancers.
http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm426485.htm

September
39. US study finds Gardasil protects boys and girls aged 9 to 15 years for at least 8 years following vaccination.
http://pediatrics.aappublications.org/content/134/3/e657.long
**August**

38. US experts call on healthcare providers to provide the same strong recommendation for HPV vaccination as they do for other adolescent vaccines in order to play an active role in HPV-related cancers prevention.  

37. Brazilian study finds Cervarix vaccine (HPV 16&18) protected women against HPV 16 and 18 after 9.4 years of follow up. There were no safety concerns.  
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4896780/pdf/khvi-10-08-10929532.pdf

**July**

36. Danish study finds Gardasil was not associated with venous thromboembolism (blood clots).  
http://jamanetwork.com/journals/jama/fullarticle/1886177
May
35. Danish study finds the incidence of anogenital warts reduced among med (50%) and women (67%) following introduction of the national HPV vaccine programme. https://www.medicaljournals.se/acta/content/abstract/10.2340/00015555-1721

34. German study finds that antibody responses to a 2 dose schedule of Gardasil vaccine in girls aged 9-14 years is comparable to the standard 3 dose schedule. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4896558/pdf/khvi-10-05-10928022.pdf

April
33. French study finds there is no evidence of an increase in the risk of autoimmune disorders following Gardasil vaccination. http://onlinelibrary.wiley.com/doi/10.1111/joim.12155/epdf

32. European Commission grants marketing authorisation for a 2-dose schedule of Gardasil vaccine for children aged from 9-13 years.

March
31. WHO evidence review concludes that there are no safety issues with Gardasil vaccine. WHO states that allegations of harm based on weak evidence can lead to real harm when, as a result, safe and effective vaccines cease to be used. http://www.who.int/vaccine_safety/committee/topics/hpv/GACVS_Statement_HPV_12_Mar_2014.pdf
2013

**December**
30. WHO states that there is no increase in risk of autoimmune diseases, including MS, among girls who received HPV vaccine compared to those who had not. http://www.who.int/vaccine_safety/committee/topics/hpv/GACVS_Dec_2013_HPV_France_Dec20_Final.pdf?ua=1

29. Brazilian study finds that HPV prevalence was much lower among vaccinated compared to unvaccinated women four years after Cervarix vaccination, suggesting protection against oral HPV infection, and associated oropharyngeal cancer. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3714284/pdf/pone.0068329.pdf


**November**
27. UK study finds that the HPV vaccine programme had led to a reduction in genital wart diagnoses at Genitourinary medicine clinics. http://jid.oxfordjournals.org/content/208/9/1397.full.pdf+html

**October**
26. Australian study finds that population-based HPV vaccination program in schools significantly reduced cervical abnormalities for vaccinated women within five years of implementation. https://www.ncbi.nlm.nih.gov/pmc/articles/PMid/24148310/

25. Scandinavian study finds that Gardasil was not associated with blood clots or adverse events related to the autoimmune and brain systems. http://www.bmj.com/content/bmj/347/bmj.f5906.full.pdf
21. American Academy of Pediatrics (AAP) and US CDC states that HPV vaccine is an anti-cancer vaccine and that preteen and teens are relying on the adults in their lives to help protect them and that no serious safety concerns have been identified. [http://www.cdc.gov/media/releases/2013/p0725-HPV-vaccine.html](http://www.cdc.gov/media/releases/2013/p0725-HPV-vaccine.html)

20. WHO states that following review of evidence from all sources there were no HPV vaccine safety concerns. [http://www.who.int/vaccine_safety/committee/topics/hpv/130619_HPV_VaccinesGACVSv2.pdf?ua=1](http://www.who.int/vaccine_safety/committee/topics/hpv/130619_HPV_VaccinesGACVSv2.pdf?ua=1)

July

23. US study finds that increased uptake of HPV vaccine among adolescent females coincided with a reduction in the annual rate of high-grade cervical and adenocarcinoma in situ in females ages 21 to 24 years. [http://cebpaacrjournals.org/content/22/8/1446.long](http://cebpaacrjournals.org/content/22/8/1446.long)

August
24. US study finds that vaccine-type HPV prevalence decreased by 56% among females aged 14-19 years within 4 years of vaccine introduction. [http://jid.oxfordjournals.org/content/208/3/385.full.pdf+html](http://jid.oxfordjournals.org/content/208/3/385.full.pdf+html)
February
19. Multicentre (US, Canada and Brazil) study demonstrates that women aged 15-25 years were protected against HPV types 16 and 18 cervical changes 8.4 years after Cervarix vaccination.  
http://www.tandfonline.com/doi/full/10.4161/hv.18865#aHR0cDovL3d3dy50YW5kZm9ubGluZS5jb20vZG9pL3BkZi8xMC40MTYxL2h2LjE4ODY1P25lZWRBY2Nlc3M9dHJ1ZUBAQDA=

18. US study finds girls who received Gardasil were not more likely to develop autoimmune disorders than those who were unvaccinated.  
October
17. Costa Rican study finds that Cervarix resulted in complete protection HPV16 and HPV18 infections and partial protection against HPV31, 33, and 45 in HPV-naïve young women.  
http://cancerdiscovery.aacrjournals.org/content/1/5/377.long

16. US study finds women and girls who received Gardasil were no more at risk of allergic reactions, anaphylaxis (severe allergic reaction), Guillain–Barré Syndrome (GBS), stroke, blood clots, appendicitis, or seizures than those who were unvaccinated or who received other vaccines.  

September
15. Catch-up programme is introduced, with all girls in sixth year or equivalent from 2011 to 2014 offered Gardasil.  
2011

July
14. US review finds that Cervarix has the potential to reduce the incidence of cervical cancer from the current 50–80/100,000 women to 9.5/100,000 women. 
http://doi.org/10.5402/2011/457204

June
13. Australian study finds a reduction in the number of high grade cervical lesions within 3 years of the introduction of the national HPV vaccination programme. 

February
12. US study finds that Gardasil prevents infection with HPV-6, 11, 16, and 18 and the development of related external genital lesions in males 16 to 26 years of age.

January
11. Australian study finds diagnoses of genital warts reduced by 59% for young female residents after introduction of Gardasil vaccination programme. 
2010

September

10. HPV Vaccine school programme is introduced in Ireland.

October
9. FDA approves Cervarix for the prevention of cervical cancer, and precancerous lesions by HPV types 16 and 18.
http://www.fda.gov/biologicsbloodvaccines/vaccines/approvedproducts/ucm186959.htm

August
8. WHO states that the evidence on the safety of HPV vaccines is reassuring.
WHO Weekly Epidemiological Record No. 32, 2009, 84, 325–332 http://www.who.int/vaccine_safety/committee/reports/wer8432.pdf?ua=1

7. U.S. Centers for Disease Control and Prevention (CDC) and FDA confirms that Gardasil is safe, effective and that benefits outweigh risks.

February
6. EMA recommends continued vaccination with Gardasil and concludes that the benefits of Gardasil outweigh the risks.
September
5. FDA extends Gardasil licence indication to include prevention of vaginal and vulvar cancers related to HPV types 16 and 18.
September

July
3. WHO Global Advisory Committee on Vaccine Safety (GACVS) states that the current evidence on the safety of HPV vaccines is reassuring. *WHO Weekly Epidemiological Record Nos. 28/29, 2007, 82, 245–260* http://www.who.int/vaccine_safety/committee/reports/wer8228_29.pdf?ua=1
September
2. European Medicines Agency (EMA) grants a marketing authorisation for Gardasil vaccine throughout the European Union, including Ireland.

June
1. US Food and Drug Administration (FDA) approves Gardasil for the prevention of cervical cancer, and precancerous lesions by HPV types 6, 11, 16 and 18.
http://www.fda.gov/BiologicsBloodVaccines/Vaccines/ApprovedProducts/ucm111283.htm