



Maryland Chapter

**The HPV Series: Quick Facts About HPV and the HPV vaccine
Issue 9: June 23, 2014**

Through financial support from The Department of Health and Mental Health (DHMH) it is our pleasure to share with you a series dedicated to the HPV vaccine in the pediatric setting. Each issue will present a literature review for the provider with questions and answers on key issues for parents and caretakers. The AAP and CDC have both recommended vaccination starting at eleven to twelve years of age for both boys and girls; however, the vaccine still remains poorly utilized. ¹

This Issue will summarize key facts about HPV as presented earlier in the HPV series.

- There are over 100 strains of HPV. Of these strains types '16' and '18' account for 70% of cancers. (1)
- In the US there are 11,070 cases of cervical cancer annually, which result in almost 4,000 deaths. (1)
- Additionally 26,000 other cases of cancer such as oral, oro-pharyngeal, penile, anal and vaginal cancers are caused by HPV each year. (1)
- For those with >6 sexual partners prevalence of HPV is as high as 55.5%. However, for those who reported only one lifetime partner, HPV is still found in 18% of cervical swabs, even in those who report no sexual partners, HPV was found in 15% of patients. (2)
- **A 2014 study of the HPV vaccine was shown to reduce the number of both low and high grade abnormalities found on pap smears by 36% and 54% respectively. (3)**
- Research from 2012 into the adoption of the vaccine finds that only 54% of eligible females across the nation received one dose and only 34% of eligible females have completed the series. Of the same population 84% had at least one health care visit with a missed opportunity to give the vaccine. (4)
- HPV vaccine adoption increases from 21% to 62% if the PCP recommends vaccination. (5)
- 1% of the population has clinically apparent genital warts. 90% are types (6 and 11) which are covered by the quadrivalent HPV vaccine. (6)
- The HPV vaccine has been effectively shown NOT to increase promiscuity or age of sexual debut in prospective observational studies. (7)
- Men have a 10% prevalence rate for oral HPV compared to only 3.6% for women. The oncogenic type 16 is the most common form of oral HPV. (8)
- The next generation of HPV vaccine "V503" may be approved for use by the end of 2014 and will include an additional 5 strains (**31, 33, 45, 52, and 58**) covering 97% of high risk HPV types. (9)

¹ The Author: Theodore Wilson MD is working with the Maryland AAP chapter. He has no financial conflicts of interest or investments in any products discussed. Reproduction is permitted.

References:

- 1) CDC Pink Book "Human Papillomavirus Epidemiology and Prevention of Vaccine-Preventable Diseases" The Pink Book: - 12th Edition Second Printing (May 2012)
<http://www.cdc.gov/vaccines/pubs/pinkbook/hpv.html>
- 2) Hariri, Susan "Prevalence of Genital Human Papillomavirus Among Females in the United States, the National Health and Nutrition Examination Survey 2003-2006" *The Journal of Infectious Disease* 2011;204 (15 August) <http://jid.oxfordjournals.org/content/204/4/566.full.pdf+html>
- 3) "Effectiveness of quadrivalent human papillomavirus vaccine for the prevention of cervical abnormalities: case-control study nested within a population based screening programme in Australia" *BMJ* 2014;348:g1458 <http://www.bmj.com/cgi/doi/10.1136/bmj.g1458>
- 4) CDC "Human Papillomavirus Vaccination Coverage Among Adolescent Girls, 2007–2012, and Postlicensure Vaccine Safety Monitoring, 2006–2013" *CDC MMWR* July 26, 2013 Vol. 62 No. 29
<http://www2.aap.org/immunization/illnesses/hpv/HPV2013MMWR.pdf>
- 5) Dorrell, Christina et al. "Factors That Influence Parental Vaccination Decisions for Adolescents, 13 to 17 Years Old National Immunization Survey–Teen, 2010" *Clinical Pediatrics* February 2013 vol. 52 no. 2 162-170 <http://cpj.sagepub.com/content/52/2/162.short>
- 6) CDC Red Book -Genital Warts" American Academy of Pediatrics. Red Book: 2012 Report of the Committee on Infectious Diseases. Pickering LK, ed. 29th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2012. <http://aapredbook.aappublications.org>
- 7) Sexual Activity Related Outcomes After Human Papillomavirus Vaccine Administration of 11-12 year olds. <http://pediatrics.aappublications.org/content/early/2012/10/10/peds.2012-1516>
- 8) Gillison et al. "Prevalence of oral HPV infection in the United States, 2009-2010" *JAMA*. 2012 Feb 15;307(7):693-703 <http://www.ncbi.nlm.nih.gov/pubmed/22282321>
- 9) Root, Cyndi "FDA to Review Merck's V503 HPV vaccine" *Pharmaceutical Online*, Published Online Feb 25 2014 accessed 3/17/2014 <http://www.pharmaceuticalonline.com/doc/fda-to-review-merck-s-v-hpv-vaccine-0001>