



By Dr. Jeff Ribordy

May 14 (Mother's Day!) through May 20 is National Women's Health Week. You will likely see many local media advertisements all month encouraging women to get screened for cervical cancer, the fourth most common type of cancer in women. However, there is a vaccine available for children and adolescents that could prevent many, if not most, of these cancers. As an added bonus, it can even prevent some types of cancer in men.

Since 2006, the Human Papillomavirus (HPV) vaccine has been used to prevent a sexually transmitted illness (STI) in men and women that can immediately lead to genital warts or in the long term, cancer. By 2015, the vaccine had been approved in 129 countries and 205 million doses had been administered. The original vaccine was known as HPV4, as it protected against four strains of the virus. In 2014, HPV9 was introduced (adding five more strains) and is now the more commonly used vaccine.

Worldwide, HPV is the most common STI and more than a half million new cases of cervical cancer are discovered every year. HPV can cause cervical and other cancers including cancer of the vulva, vagina, penis, anus or throat, including the base of the tongue and tonsils (called oropharyngeal cancer).

Until October 2016, in the US, HPV9 was a three shot series over a period of six months starting at age 9 years but typically given at age 11. Now, for children ages 9-14, a shorter two-shot series (given six months apart) is available. Adolescents 15 years or older receiving their first vaccination will still require three shots. This is due to the fact that younger children have a better protective response to the vaccine.

A review done last year, celebrating the 10th anniversary of the vaccine and reported in the journal *Clinical Infectious Diseases*, looked at the effectiveness of the vaccine worldwide. The results were impressive.

A total of 58 studies from nine countries were reviewed. The studies showed that only four years after the vaccine was introduced, most countries had significantly fewer HPV infections. For example, in Australia, women who received all three shots had almost 90 percent fewer HPV infections; and women who received only one or two HPV shots had almost 80 percent fewer HPV infections. In the U.S., among sexually active females

ages 14-24 who received only one or two shots, there was a 90 percent reduction in HPV rates. Even more remarkable, women who did not receive the HPV vaccine still had up to 50 percent reduction in HPV rates! This is likely due to herd immunity as seen with many other vaccines. And as expected, rates of genital warts and abnormal Pap smear results (that can eventually turn in to cervical cancer) also decreased in all countries that were studied.

However, there is still a ways to go. Vaccination rates have remained low in some countries like the U.S. and France while many other countries such as the United Kingdom, Denmark, Colombia, Malaysia, Rwanda, and South Africa have reached rates greater than 80 percent.

The expectation with such dramatic declines in HPV infection will be a dramatic decline in cervical cancer rates over the next 10 to 20 years. By then, perhaps, media campaigns encouraging Pap smears will be a thing of the past.

*Jeff Ribordy, MD, is Regional Medical Director for Partnership HealthPlan of California.*