What is HPV?
The human papillomavirus, more commonly known as HPV, is a group of more than 150 related viruses; each is given a number that is referred to as an HPV type. Some HPV types cause warts and papillomas (non-cancerous tumors) and others cause cancers.

Is HPV contagious?
Yes. HPV is a contagious virus and is so common that most people get it at some time in their lives.

How can people get HPV?
HPV is passed on by contact with the virus.

In adults, HPV is most commonly transmitted by having vaginal, anal, or oral sex with someone who has the virus. HPV can be passed on even when an infected person has no signs or symptoms. You also can develop symptoms and cancer years after you have sex with someone who is infected, making it hard to know when you first became infected.

A mother who is infected with the virus can pass on the infection to her child before birth via the blood stream or during birth through the vaginal canal.

What is a vaccine and how are HPV vaccines administered?
Vaccines are used to strengthen the body's immunity from a disease and can be administered through needle injections, by mouth, or by aerosol. After vaccination, exposures to disease-causing agents are less threatening to an individual's health due to the body's well developed immune response.

HPV vaccines are administered via needle injection and do not contain any live virus, or even killed virus or DNA from the virus, so they cannot cause cancer or other HPV-related illnesses.

What are the two types of HPV vaccines?
HPV types 16 and 18 cause 70% of all cervical, anal, and genital cancers in women, and 70% of anal cancers in men. HPV types 6 and 11 cause 90% of all genital warts in men and women. Recent studies show that about 70% of cancers of the oropharynx may be linked to HPV. Gardasil is approved by the US Food and Drug Administration for use in females for the prevention of cervical cancer, and some vulvar and vaginal cancers, caused by HPV types 16 and 18, and in males and females to prevent anal cancer and precancerous anal lesions caused by HPV types 16 and 18. Gardasil is also approved to prevent genital warts caused by HPV types 6 and 11. The vaccine is approved for females and males ages 9 to 26.

Cervarix is approved for females ages 9 to 25 to prevent cervical cancer caused by HPV types 16 and 18.

A new vaccine that will protect against nine strains of HPV was approved by the U.S. Food and Drug Administration, but it is not yet available.

Who should be vaccinated and when?
Boys and girls who are 11 or 12 years old should get the HPV vaccine. It is recommended along with other vaccines for this age, Tdap and meningococcal, as well as the annual flu vaccine. Catch-up vaccination is recommended for females through age 26 and males through age 21. The vaccine is administered in three doses, with the second dose given one to two months after initiation and the third dose given six months after. The HPV vaccine can be given on the same day that the child receives the Tdap and meningococcal vaccines.
What health problems are caused by HPV?
HPV can cause genital warts and cancers. The following cancers can be caused by HPV:

- Vulvar
- Vaginal
- Cervical
- Penile
- Anal
- Oropharyngeal (throat)

HPV can also cause Recurrent Respiratory Papillomatosis (RRP) which results in wart-like growths in the throats of infants who contract HPV from infected mothers during childbirth. The affected infants usually must undergo multiple surgeries.

Why do boys need to be vaccinated?
As described above, HPV causes cancers in males as well as females. These include penile, anal, and oropharyngeal cancer. New cases of HPV-related oropharynx cancer presenting to MD Anderson are increasing at an alarming rate; from 169 cases in 1990 to 530 in 2012.

Why is the vaccine recommended at such a young age?
The HPV vaccines produce a higher immune response in preteens and young teens than they do in older teens and young adults - which is why it is so important for children to get vaccinated earlier than age 14. People should receive all three doses of the HPV vaccine series long before they begin any type of sexual activity and are exposed to HPV.

Why can’t the vaccine be given to infants?
Research shows that HPV vaccine protection lasts for at least 10 years, and researchers believe that the protection should last for longer. The best immune response has been shown to occur at the preadolescent age range, meaning a stronger ability to protect. There is no clinical trial with the vaccine in infants.

Is the HPV vaccine safe?
Yes. The vaccine has been extensively monitored for safety. Common side effects include pain, redness or swelling, and possible fainting. These effects go away on their own. Brief fainting spells can happen after any medical procedure, including vaccination. Some other reactions can include low fever, headache, nausea, vomiting, and muscle or joint pain. These are all considered mild reactions. No severe or unusual reactions have been listed. There is always a risk of allergic reaction with any vaccine, which is why patients are questioned about allergies and are monitored for symptoms for 15 minutes after being vaccinated.

How are the HPV vaccines covered?
HPV vaccinations for males and females are fully covered by insurance companies under the Affordable Care Act and Vaccines for Children. However, if you are over the age of 18 and you are uninsured at this time you will have to pay out-of-pocket for the vaccine.

What is the annual HPV-related disease cost in Texas?
In Texas, annual HPV-related disease costs for men and women approach $170 million.

Does HPV vaccination lead to riskier sexual behavior?
No. Studies have shown that being vaccinated against HPV will not affect sexual behavior, nor does it associate with increased sexual activity-related outcomes. For those who practice abstinence, there is no guarantee that a future partner will have made the same choice, leaving them open to future infection. Even in the absence of intercourse, HPV can be spread through intimate skin to skin contact. Even in the absence of intercourse, HPV can be spread through intimate skin to skin contact.

What is the likelihood of acquiring an HPV infection?
The lifetime risk of acquiring an HPV infection is approximately 75%-80%. HPV is the most common sexually transmitted infection (STI). HPV is so common that nearly all sexually active men and women get it at some point in their lives. Each year, 21,000 cases of HPV-related cancers could be prevented by getting the HPV vaccine.

Why does the U.S. use a three-dose vaccination schedule?
Currently in the U.S., the three-dose series is recommended by the Advisory Committee on Immunization Practices (ACIP). Other countries and the World Health Organization (WHO) have adopted a two-dose vaccination schedule for boys and girls ages 9-13 years old. Vaccine approval, licensing, and recommendation follows a set process in each country, and providers in the U.S. will continue to offer a three-dose series unless national policy changes. Studies have shown good immune response to the two-dose schedule however further research is necessary to determine whether the duration of protection the new schedule provides is comparable with the three-dose schedule.

Why not wait for the HPV9 vaccine?
HPV9 vaccine was approved by the Food and Drug Administration in December 2014, and the process of considering recommendations is underway. The American Academy of Pediatrics Committee on Infectious Diseases recommends that HPV2 or HPV4 should continue to be used until official recommendations are made regarding HPV9. The CDC Advisory Committee on Immunization Practices (ACIP) will meet to consider uses for HPV9 vaccine at its meeting in February 2015. A child should receive HPV vaccine at the optimum time, which is at ages 11-12.