WHAT IS HPV?
Human Papillomavirus (HPV) is the name of a family of viruses that has over 100 different strains. Certain strains have a tendency to infect different parts of the body:
- Some types of HPV, known as “low-risk” types, cause genital warts in men and women.
- Other HPV types, known as “high-risk” types, can cause cervical cancer. High-risk HPV strains can also cause less common cancers, such as cancers of the vulva, vagina, anus, penis, and oropharynx (the back of the throat).

This handout focuses on HPV strains that cause cervical cancer. The HPV strains that cause genital warts rarely cause cervical cancer. For information about HPV and genital warts, please refer to the handout “Genital Warts (HPV).”

HOW COMMON IS HPV?
- Genital HPV is very common! It has been estimated that 75-80% of sexually active adults will become infected with genital HPV before the age of 50.
- Only a small proportion of women infected with HPV will develop cervical cancer. Most the time, the body’s immune system will clear an HPV infection on its own within 2 years.

HOW IS HPV TRANSMITTED?
- Genital HPV is passed by direct skin-to-skin contact with an infected person, most often during vaginal or anal sex. It can also be passed through oral sex and any other contact involving the genital area (genital-to-genital, hand-to-genital, etc.).
- Most people with HPV do not realize that they are infected and that they can pass the virus on to others.

HOW DOES HPV CAUSE CANCER?
- While there are more than 40 genital types of HPV, only a few types can lead to cervical cancers.
- High-risk HPV strains can cause normal cells of the woman’s cervix (the opening to the uterus) to become abnormal. Most of the time, the body fights off the infection naturally, and the cells return to normal.
- If high-risk HPV is not cleared by the immune system, it can linger for many years and eventually transform abnormal cells into cancer. About 10% of women with a high-risk HPV infection of the cervix will develop long-lasting infections that, if left untreated, can lead to cervical cancer.
- The HPV strains that cause cervical cancer can also lead to much less common cancers, such as those of the vulva, vagina, penis, and anus.
- Heterosexual men rarely develop cancer from HPV.
- Men who have sex with men (MSM) are at increased risk for developing anal cancer from high-risk HPV strains.
- Co-factors that speed the growth of HPV include poor nutrition, sleep deprivation, tobacco use, drug/alcohol use, medical conditions that suppress the immune system (HIV), and stress.

WHAT ARE THE SYMPTOMS OF HPV?
- Most people do not have symptoms, so that they don’t even realize that they are infected.
- Low-risk HPV types that are not cleared by the body can lead to the development of genital warts.
- High-risk HPV types can lead to the development of cervical cancer over an average of 15 years, although more rapid courses have been reported.

Cervical cancer usually does cause symptoms until late in the disease process. These may include abnormal vaginal bleeding, increased vaginal discharge, pelvic pain, and/or pain during sex.
HOW IS HPV DIAGNOSED ON A PAP SMEAR?

- Because high-risk HPV types can cause cervical changes without noticeable symptoms, women should get routine Pap smears to screen for cervical cancer. A brush is used to sample cells from the cervix; the cells are then examined for any abnormal changes caused by HPV. When indicated, the Pap test can also determine if HPV DNA is present within the cervical cells.
- HPV can also lead to anal cancer, particularly in high-risk populations such as gay and bisexual men. Currently, screening with anal Pap smears is not routinely recommended because more research is needed to determine if early detection prevents cancer.

HOW OFTEN DO I NEED A PAP?
The first Pap smear should be performed when a woman turns 21 years of age, regardless of sexual activity. Women ages 21-29 should have a Pap smear every 3 years if results are normal. Abnormal results require more frequent Pap smears and follow-up. Please refer to the handout “Your Pap Smear: What You Need to Know” for more information.

HOW IS AN ABNORMAL PAP SMEAR TREATED?
Depending on the severity of the changes found on the Pap smear and your age, treatment may consist of continued observation or referral to a gynecologist for colposcopy. A colposcopy helps to further identify abnormal cervical tissue that can be biopsied and removed. Close follow-up after treatment is important.

CAN HPV BE PREVENTED?
Yes, there are several ways to decrease your chances of getting HPV if you are sexually active.
- **Choose to be monogamous and to use latex barriers (eg. condoms, dental dams, finger cots) all the time.** Even though condoms cannot cover all areas of skin that may harbor HPV (eg. the scrotum, outer labia), consistent condom use is known to lower the risk of HPV and HPV-related diseases. Condom use also helps protect the cervix and promote the clearance of HPV.
- **Get vaccinated.** Gardasil and the new Gardasil 9 are safe and effective vaccines that protect against HPV strains that cause the majority of cervical cancers and genital warts. These vaccines do not treat or cure existing HPV infections.
  - Gardasil protects against 4 HPV types known to cause 70% of cervical cancers and 90% of genital warts. Gardasil 9 provides further protection against 5 other HPV types that cause an additional 19% of invasive cervical cancers.
  - Both Gardasil vaccines have been shown to prevent anal cancer in men who have sex with men (MSM).
  - HPV vaccines are given in 3 doses over 6 months and have been approved for use in females ages 9-26 and males ages 9-21 (up to age 26 in MSM).
  - These vaccines are most effective among individuals who have not yet been infected with HPV (ie. prior to becoming sexually active). However, they can still protect individuals already infected with HPV from other HPV types that they have not been exposed to yet.

CAN CERVICAL CANCER BE PREVENTED?
Absolutely! Routine pap smears can detect precancerous changes, which are 100% curable if found early. Yet almost 4,000 women die every year in the US from cervical cancer. If you have an abnormal Pap smear, it is very important to follow up as directed by your health care provider.

HOW CAN I DEAL WITH MY FEELINGS ABOUT HPV?
Educate yourself about HPV, and talk to your medical provider if you have any questions or concerns.
- **Realize that HPV can be managed and that cervical cancer is preventable with regular Pap smears.**
- **Remember that you are not alone.** Millions of Americans have HPV, and most do not develop long-term problems with close medical follow-up.

RECOMMENDED RESOURCES:
- American Social Health Association STI Resource Center Hotline, 1-919-361-8488
- CDC National STD Hotline, 1-800-232-4636
- VCU’s Wellness Resource Center carries copies of *HPV News*, which is one of the most accurate sources of information about HPV. Information about area support groups is also available.

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University Student Health Services (804) 828-8828 - Monroe Park Campus; (804) 828-9220 - MCV Campus
Wellness Resource Center (804) 828-9355 - 815 S. Cathedral Place Revised 3/17