Human Papilloma Virus (HPV)

A Sexually Transmitted Disease (STD)
which can lead to
Cervical, Penile and Anal Cancer

What Adolescents Need to Know!

TALKING POINTS

Most people have heard of HIV/AIDS; however, most people are not familiar with HPV.

HPV is the most common Sexually Transmitted Disease in the United States.

HPV has significant health consequences.

Adolescents are at higher risk than adults for getting HPV infections.

This presentation has been developed to educate adolescents about this risk and the significant health consequences associated with HPV.
### STDs with significant health consequences...

<table>
<thead>
<tr>
<th>STD</th>
<th>Frequency</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPV</td>
<td>5.5 million</td>
<td>Genital warts and cervical, penile and anal cancer</td>
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<tr>
<td>Chlamydia</td>
<td>3 million</td>
<td>Pelvic inflammatory disease (PID), which can cause damage to the fallopian tubes and infertility</td>
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<tr>
<td>Herpes</td>
<td>1 million</td>
<td>Life-long disease with repeated outbreaks. May cause serious complications to babies born to mothers with an active infection</td>
</tr>
<tr>
<td>HIV</td>
<td>20,000</td>
<td>AIDS, which may lead to death</td>
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### TALKING POINTS

There are 5.5 million new cases of HPV in the United States each year.

This is 250 times greater than HIV/AIDS!
What is HPV

- Human Papilloma Virus (more than 70 types)
- A group of viruses that infect the skin and cause warts
- Certain types cause warts on the genitals and can be transmitted by sexual contact.
- Genital HPV can spread through skin-to-skin contact

Warts are small cauliflower-like skin growths that appear as a result of skin infection by HPV.

HPV may cause other skin changes that may not be visible to the naked eye but can be detected by special instruments.

Sex partners can pass the infection even though they may not know they have the virus.
Who is at risk

• If you are sexually active...
  and have had sexual contact (oral, anal or vaginal)
  with more than one partner
  (or your partner has had contact with more than one partner),
  you are at increased risk for having
  Human Papilloma Virus (HPV),
  a sexually transmitted disease (STD).
• Adolescents are at a higher risk for HPV infection.

TALKING POINTS

The more sexual partners you have the greater the risk you will catch HPV.

Every time you have sexual contact (oral, anal or vaginal), you are being exposed to everyone your partner has ever had sexual contact with.

A younger woman has less mature cells in her cervix and therefore more easily infected by the virus. Also the cervix of a younger woman has less developed defense (antibodies) against HPV.
HPV in males...

HPV may cause genital warts on the penis, scrotum, anus or groin.

HPV may also lead to penile and anal cancer; however this is rare.

TALKING POINTS

The diagram is self explanatory.
Genital Warts...

Genital warts may be invisible to the naked eye, but they may become severe and disfiguring.

Photo - Fitzpatrick, Dermatology in General Medicine

TALKING POINTS

Warts may be too small to be seen.

When visible, they can range in size from very small to very large.

Warts can be single or multiple and in some cases numerous warts can be present.
HPV in females…

HPV may cause genital warts on the labia or groin, in the vagina and on the cervix.

TALKING POINTS

External warts on the labia may or may not be easily seen.

Warts in the vagina or on the cervix can only be seen during an internal exam.
TALKING POINTS

Similar to lesions on the penis, scrotum, labia or anus, HPV changes on the cervix or in the vagina may appear as a raised warty tissue or as flat white patches.
No warts = no virus  FALSE!

- Less than 10% of people who have HPV will have warts.

- Even if you have no warts but you have had sexual contact (oral, anal or vaginal) you could have HPV and be capable of passing it on to your partner.

TALKING POINTS

Like the herpes virus, HPV can live in cells for a period of time that may range from one month to several years without causing visible changes (such as warts or Herpes blisters).

If you have the virus (visible or invisible) you are a carrier, and can pass it on to someone else.

HPV does not live well on non-living objects (such as toilets or clothing). It lives in cells and on pubic hair. The HPV virus passes easily from one individual to another through direct skin to skin contact with infected genital areas.
Pre-cancerous changes...

In addition to warts, females who have HPV are at risk for developing pre-cancerous changes on the cervix.

– If found, pre-cancerous changes can be treated.
– If left undetected, pre-cancerous changes may become cancer.

TALKING POINTS

Pre-cancerous changes can be found with a Pap test, which will be described in further detail on a separate slide.

Note: Pre-cancerous changes are also known as ‘dysplasia’ or Squamous Intraepithelial Lesions (SIL).
Can I check for HPV changes?

- Genital warts may be found by doing a self check. Males and females should look for elevated warts or flat white patches on the penis, scrotum, anus, groin or labia.

- Females should have a yearly Pap test which can check for warts and pre-cancerous changes in the vagina or on the cervix.

**TALKING POINTS**

You may never know if you have the virus, but it is important to look for any changes caused by the virus.

If you find elevated warts or flat white patches during a self check, you should make an appointment to be seen by a health care provider.

If warts or precancerous changes are found on a Pap test, it is important to schedule a repeat visit with your health care provider to discuss further evaluation, testing and/or treatment options.
What is a Pap test...

• A Pap test is a simple and painless lab test.

• A Pap test can detect infections, genital warts, pre-cancerous changes and cancer of the cervix.

• All sexually active females (regardless of age) and all women over age 18 should have a Pap test every year.

TALKING POINTS

It is the recommendation of the American Cancer Society that all sexually active females (regardless of age) and all women over age 18 should have a yearly pelvic exam and a Pap test.

Note: The cost of a Pap test ranges from $25.00 to $45.00. The Pap test is paid for by most insurance companies. It is also paid for by Medicare and Medicaid. For individuals without insurance, family planning clinics often have a sliding fee scale to make Pap tests affordable for everyone.
How is a Pap test done?

- A small brush or spatula is used to collect cells from the cervix (the opening to the uterus or womb).
- The sample is sent to the lab and the cells are examined under a microscope.

TALKING POINTS

During a gynecologic examination, a speculum is introduced into the vagina so that the cervix and vagina can be visible.

A Pap test is collected by softly brushing the surface of the cervix with one (or more) of the collection devices shown. This sample is placed on a glass slide or dispensed into a collecting fluid and sent to the cytology laboratory to be examined.

Some women find this uncomfortable, but not painful.

Pap tests are performed by health care professionals

- physicians
- physician’s assistants
- nurse practitioner
- nurse midwives
TALKING POINTS

The cervix is shaped like a donut and is approximately the size of a golf ball.

In the center of the cervix is an opening, which leads to the body of the uterus (or womb). In a Pap test, cells are collected from this area.

The cells on the outer surface of the cervix are similar to those found on the skin. These cells are several layers thick and are protective in nature.

The cells in the opening to the uterus are different. They are a single layer thick and secrete mucus. These cells are less protective in nature.
TALKING POINTS

The left side of this fragment of tissue shows thick, multiple layers of skin-like cells (stratified squamous epithelium).

The right side of this fragment of tissue shows a single layer of mucus producing cells (simple columnar epithelium).

Where these two types of cells meet is called the squamo-columnar junction. The area adjacent to this junction is more susceptible to HPV infection.
TALKING POINTS

NORMAL - The development of normal tissue involves a process of cell growth. Small, young (immature) cells with a large nucleus (the brain of the cells which contains the DNA) lie deeper in the tissue. As cells grow toward the surface, they become larger and have a smaller (mature) nucleus. Cells fall off the surface as they continue to grow and die. This is a continuous process. If the cell’s DNA is damaged by HPV (see note), this normal process is affected. The cells continue to grow, but with changes.

LOW RISK - If the damage causes a ‘Low Risk’ change, some cells will continue to grow normally, others will grow but with an altered, larger nucleus. This change does not affect all layers of the tissue.

HIGH RISK - If the damage causes a ‘High Risk’ change, most of the cells will grow with altered nuclei and all layers of the tissue will be affected.

CANCER - Notice that this is the only diagram where cells are found below the line (basement membrane). Under this line we find blood vessels and connective tissue. Cancer cells actually grow into (invade) and destroy this neighboring tissue and may travel and invade other areas of the body (metastasis).

Note: In other types of cancer, the damage may be caused by other viruses, cigarette smoke, ultra violet light, radiation, chemicals or alcohol.
TALKING POINTS

In this picture, the entire cervix has been replaced by a cancerous growth.
Who gets pre-cancerous changes?


TALKING POINTS

The horizontal axis shows the age groups. The vertical axis indicates the number of abnormal pap smears for each age group as a percentage of the total pap smears performed for that group.

Sexually active adolescents are more susceptible to getting HPV, and as a result are at a higher risk for having pre-cancerous changes.

While 20-24 year olds have the highest percentage pre-cancerous change, 15-19 year olds are not far behind. Even at ages 10-14, sexually active teens have as high a rate of pre-cancerous change as do females 30-35 years old.

The point of this educational project is to lower these numbers!
Risk factors linked to HPV and cancer...

- **Risk Factors**
  - Age at first intercourse
  - Number of sexual partners
  - Tobacco use

- **High Risk Behaviors**
  - While not a risk factor, drug and alcohol usage often leads to an increase in unplanned sexual activity which, in turn, increases your risk for catching HPV.

**TALKING POINTS**

The younger the age of first sexual intercourse the higher risk for getting HPV.

Like cancers for many parts of the body, the breakdown products of nicotine have been found in cervical cancer. As such, tobacco use is considered a risk factor for cervical cancer.
How can I prevent getting HPV?

- Delay sexual contact (oral, anal or vaginal) until I am older
- Limit the number of sexual partners
- Use barrier protection (condoms, dental dams)

* Remember condoms do **NOT** offer 100% protection against HPV. Since condoms only cover the penis, condoms do not stop the spread of the virus from the scrotum, groin, anus or labia.

TALKING POINTS

While condoms do not offer 100% protection against HPV, Herpes and HIV viruses, the use of barrier protection should be encouraged as they do help to reduce the risk of STD infection.

Note: A dental dam is a thin, square piece of latex that can used for protection during oral sex.
TALKING POINTS

National data shows a decline in the number of high school students who are sexually active. This decline is due, in part, to HIV/AIDS educational programs and overall awareness of STDs.

HPV and the health consequences from HPV infections are a direct result of the level of sexual activity.

Providing adolescents the facts about HPV and teaching them the refusal skills they need to say NO is key to modifying sexual behavior.
Why haven’t I heard more about HPV?

• Your parents probably know less about HPV than you do!
  • The association of HPV and cancer has only been understood for the past 10-15 years.
  • The high percentage of HPV infections in adolescents has only been appreciated in the past 3-5 years.

TALKING POINTS

Older individuals did not have the benefit of knowing about HPV and HIV/AIDS when they were adolescents making decisions about sexual activity.

We can’t change the past, but you, as an individual, are in a position to use the FACTS to protect your future.
Can HPV be treated?

- There are several types of treatment for genital warts and pre-cancerous changes, **but these treatments do not remove the virus itself.** Treatment only controls the outbreak of warts.
  - the virus may go away on its own
  - it may remain latent (without symptoms)
  - it may cause additional warts or changes

**TALKING POINTS**

Our bodies immune system attempts to fight off pre-cancerous changes.

Because of this, only 1 in 5 patients with ‘Low Risk’ change will develop ‘High Risk’ change.

High Risk changes are more serious. Half of the patients with ‘High Risk’ change will develop cancer (if the change is not found or treated).

(The types of treatment are addressed on separate slides.)
How are warts treated?

- Treatments include: prescription ointments, cryotherapy (freezing), laser therapy or surgery.
- The type of treatment depends on the size and location of the wart or change along with the patient’s preference.

* Over the counter treatments for the removal of warts on the hands and feet are NOT meant for genital warts. They are too strong and will burn sensitive genital tissue.

TALKING POINTS

While treatment to remove genital warts may be embarrassing, uncomfortable and possibly painful, it should be emphasized that self-treatment of genital warts is NOT an option!

- Only a physician can make the correct diagnosis.
- A physician knows the best way to treat the infection.
- Other infections may be mistaken for genital warts (require different treatment).
- Other non-infectious lesions may mimic warts e.g,
  - Tyson’s gland, lymphoceles
  - Pearly penile papules, which appear in 1/3 men
- the treating physician will give you information to help you care for yourself.
How are pre-cancerous changes treated?

- Treatments include: cryotherapy (freezing), laser therapy or surgery.
- The type of treatment depends on the location and degree of the change.
* It is important to know that pre-cancerous changes and cervical cancer can be cured if detected early.

TALKING POINTS

If abnormal cells are detected on a Pap test it is important to schedule a repeat visit with your health care provider to discuss further evaluation, testing and/or treatment options.

Optional Discussion

Having HPV does not generally affect getting pregnant or carrying a pregnancy to term. However, in a small number of females who have had to have treatment for a large amount of pre-cancerous change, carrying a pregnancy to term may be difficult as the cervix may be weakened and may not be able to support the weight of the baby in the womb.

In the rare case where cancer has developed, a hysterectomy may be necessary to treat the cancer. In such a case the patient would not be able to get pregnant.
Where can I go to be seen or get tested?

- A pediatrician’s or primary care provider’s office
- A gynecologist’s office
- A college/university student health center
- A family planning/women’s health clinic

TALKING POINTS

There are lots of options. Students (male and female) should be able to find an option in which they feel comfortable to seek evaluation of genital warts (or any questionable change) or to have a Pap test.
What about my partner?

If you have HPV, your partner may have HPV.

• Partners should be evaluated if they have any visible warts or changes. If your partner is a female she should have a Pap test once a year.

Should I tell my partner I have HPV?

• If they were the one with the STD, wouldn’t you want them to talk to you?

TALKING POINTS

If you have HPV, it is likely that your current partner is infected with the same virus. They may have no warts, no visible abnormalities or no abnormal cells on their Pap test, but still have the virus.

Your partner may have had the virus for some time without knowing it.

Your partner could have been the one to pass it on to you!
Why should I abstain?

- Personal goals and standards
- Moral, religious or family values
- Fear of unplanned pregnancy
- “Peer pressure” *(the majority abstains!)*
- **Significant Health Risks**

TALKING POINTS

There are many reasons to abstain from (or delay the onset of) sexual activity.

In addition to the more traditional reasons of moral/religious/family values and the fear of unplanned pregnancy, this educational program has been developed to get across two major points;

It is important for students to know that the majority (two-thirds) of 9-10 graders are NOT sexually active. Students this age should not feel alone if they choose to abstain. Not everyone is “doing it”.

There are significant health risks associated with sexual contact; HPV infection, other STDs, genital warts, pre-cancerous changes and cancer!
What have I learned...

- HPV is the most common STD in the United States, with 5.5 million new cases each year.

- Adolescents catch HPV more easily than do adults.

- Because adolescents catch HPV easier, they are at a higher risk for getting genital warts and pre-cancerous changes.

TALKING POINTS

This slide is meant to reinforce the major points of the presentation and is self-explanatory.
What can/should I do...

• If I am not sexually active...
  – I should abstain from sexual contact until I am older

• If I am sexually active...
  – I should limit the number of partners I have
  – I should always use barrier protection
  – I should seek evaluation for any visible wart or change on the penis, scrotum, anus, groin or labia
  – And, if I am a sexually active female...
    I should get a Pap test every year

TALKING POINTS

Slide is meant to reinforce the major points of the presentation and is self-explanatory.
Where can I get more information?

National STD Hotline  1-800-227-8922
National HPV Hotline  1-877-478-5868

or

www.iwannaknow.org
American Social Health Association
HPV Website for Teens

TALKING POINTS

We would suggest leaving this slide up for a period of time to provide students the opportunity to copy down the numbers. Alternately you may want to post these numbers somewhere in the class room or make a copy of the slide to pass out to students.

The State STD Hotline is also listed in the phone book (if you know where to look).
You can let students know that it is listed in the business pages under
...... State of -
Health Department
VD (Veneral Disease) Hotline