HPV Lesson Plan

Title: Learning about Human Papillomavirus (HPV)
Theme: HPV
Time: 80 minutes
Materials: *

Objectives:

• To teach students about HPV: what it is and how it is transmitted.
• To teach students about the risks associated with acquiring HPV and methods to protect themselves from contracting and/or spreading the virus.
• To acknowledge the role immunization plays in protecting students from HPV.
• To prepare grade 8 female students for the HPV School-based Immunization Clinic.
• To reflect on the material covered during the class discussion.
• To provide students with an opportunity to apply their newly acquired knowledge about HPV to hypothetical situations.
Curriculum Expectations:

Overall Expectations for Growth and Development (Health and Physical Education, p.201), by the end of Grade 8, students will:

- identify the physical, emotional, interpersonal, and spiritual aspects of healthy sexuality (e.g., respect for life, ethical questions in relationships, contraception);
- identify local support groups and community organizations (e.g., public health offices) that provide information or services related to health and well-being; as well as
- apply living skills (e.g., decision-making, problem-solving, and refusal skills) to respond to matters related to sexuality, drug use, and healthy eating habits.

Specific Expectations for Growth and Development (Health and Physical Education, p.201), by the end of Grade 8, students will:

- explain the importance of abstinence as a positive choice for adolescents;
- identify symptoms, methods of transmission, prevention, and high-risk behaviours related to common STIs, HIV, and AIDS;
- identify methods used to prevent pregnancy;
- apply living skills (e.g., decision-making, assertiveness, and refusal skills) in making informed decisions, and analyse the consequences of engaging in sexual activities and using drugs;
- identify sources of support (e.g., parents/guardians, doctors) related to healthy sexuality issues.
Background Information

This lesson is designed to prepare your female grade 8 students for the upcoming HPV immunization clinic at your school. The majority of the students that will receive the HPV vaccine do not have a clear understanding of the reasons immunization against HPV is important.

Preparing your grade 8 female students for the immunization clinics provides an excellent opportunity to teach both male and female students about more general health issues including healthy sexuality. Although only the grade 8 female students will be receiving the HPV vaccine, the information contained in this package is equally important for both female and male students, as both can transmit and acquire HPV.

There are several components to this package, including: a vocabulary exercise, a teacher-led discussion, group work, an informal presentation, and optional homework assignments. All of the information necessary to prepare for this lesson is included in this booklet. This comprehensive guide can assist you as you lead the class discussion and field student questions.
**Activity One:**

*Introduction to New Words and Phrases – 15 minutes*

In order for the students to grasp the concepts associated with HPV, they will need to learn new words and phrases. Many of these terms are medical and physiological, and students may require either extra time to read them over or significant teacher direction. There are two different ways this material can be presented:

1. On page 14 you will find a *Glossary*. We recommend that you photocopy this handout and have the students review it in advance of the lesson. If you would like to evaluate their ability to learn these new terms, you can use the *Matching Exercise: New Words and Phrases* on page 17. Ask students to study the glossary. Inform them that they will be asked to match 10 of these terms with their definitions. This way, each student can earn a grade out of 10. If you want to make the task simpler, you could tell the students in advance *which 10 terms* will appear on the matching exercise.

2. Alternatively, you could photocopy the *Matching Exercise: New Words and Phrases* on page 17 on to transparencies/PowerPoint and work through the material as a class. Should you chose this option the lesson might be divided into two classes, as defining terms and writing them on to the projectors or document will take some time.

Once you feel the students understand the new terms, you can begin Activity Two.
Activity Two:  
Teacher-Led Discussion and Group Work to Create a Health Promotional Item – 40 to 60 minutes

1. Distribute the handout entitled, **Human Papillomavirus Handout** (page 19). As you discuss the material, ask the students to follow along and add only the most important information to their handouts. The information below will help guide the classroom discussion. Feel free to alter the delivery, as appropriate, based on the academic skill and maturity of the students.

2. Divide students into groups. Each group of students will create a HPV health promotional item for students. The campaign may be in the form of a pamphlet, public service announcement (PSA), poster, etc… Campaigns can be displayed in the classroom or presented to the class.
Part One: The Human Papillomavirus (HPV)

What is HPV?

HPV is a common sexually transmitted infection (STI). There are more than 100 types of HPV. Over 30 different types of HPV affect the genital area.¹

How is HPV spread?

HPV is most commonly spread during sexual activity by skin-to-skin contact with an infected person.⁴ Every person, male or female, who has had sex, is at risk.¹⁰

What are the symptoms of HPV?

Most people never get symptoms and may not know they have been infected with HPV but they still carry the virus and can infect others.¹⁰ The immune system usually works to clear the virus from the body, which can take one to two years.¹

HPV types are divided into two categories:

- Low-risk HPV types are associated with genital warts and are not linked to cancer.
- High-risk HPV types are linked to cervical cancer as well as other cancers, such as cancers of the vulva, penis and anus.

What are the tests for HPV?

Genital warts are diagnosed by appearance. An absence of warts does not mean that the individual does not have an HPV infection. Warts are not always visible and there can be a delay between HPV exposure and the development of warts.¹
Pre-cancerous and cancerous cell changes happen in men and women if they have one of the high-risk HPV types. In women, a Pap test is required. During a Pap test some of the cells of the cervix are removed, sent to a lab and then inspected under the microscope. The cells are examined for changes.¹

There is currently no test available to diagnose young men with the HPV infection.¹⁰ For men, any changes of the skin in the genital area should be seen by a doctor.¹

**What are the current Canadian facts and statistics on HPV?**

- It is estimated that in Canada, 8 out of 10 sexually active people will get an HPV infection at least once in their lifetime.¹⁰
- The age at which most people become infected is 15 to 24.¹⁰
- Types 6 and 11, the low-risk HPV types, are not linked to cancer, but are responsible for 90% of all cases of genital warts.
- Types 16 and 18, the high-risk HPV types, are responsible for 70% of cervical cancers. Type 16 can also cause cancer of the vagina and vulva.
- Infection with high-risk types of HPV increases your risk of cancer of the cervix 20 to 100 times.¹²
- Cancer of the cervix is the second most common cancer in Canadian women 20 to 44, after breast cancer.¹⁰
- In Canada, each year 1,500 women learn that they have cervical cancer, and more than 580 die from it.¹⁰
- In Ontario, every year about 500 females are diagnosed with cervical cancer, and 140 die from the disease each year.⁵
- Genital warts are the most common sign of HPV in young men. In fact, genital warts seem to affect as many young men as young women.¹⁰
- Some very rare cancers in young men are also caused by HPV. Up to 90% of anal cancers (more common among men who have sex with men), 40-50% of cancers of the penis and 10 to 20% of cancers of the mouth, head, and neck are caused by HPV infection.¹⁰
How can HPV transmission be prevented?

The Society of Obstetricians and Gynaecologists of Canada (SOGC) state that because the HPV virus is so contagious, total prevention of HPV is not easy.

1. *Abstaining from all sexual contact, even skin-to-skin sexual activity without penetration,* is the only way to avoid contracting the HPV virus.  

2. *Practising lifelong monogamy* (having one long-term sexual partner) is another effective way to avoid contracting the HPV virus.

3. *Limiting the number of sexual partners.* The more sexual partners a person has, the higher their risk of contracting HPV.

4. *Using condoms* may not completely eliminate the risk of transmitting HPV because the virus can be contracted through skin-to-skin contact beyond the covered area.

5. *Getting immunized with the HPV vaccine can* prevent four types of HPV: the two most common types of HPV associated with cancer and the two most common types associated with genital warts.

How is HPV treated?

There is no cure for HPV, but the symptoms can be treated. Genital warts can be removed by one of several ways:

- topical prescription medicines (applied directly to warts);
- freezing;
- laser; or
- surgery.
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Infection with a high-risk HPV type can lead to changes to the cells of the cervix and cervical cancer can result. Treatment usually involves a combination of:

- repeat pap test in six months and close monitoring by a doctor and/or specialist;
- surgery;
- radiation; and/or
- chemotherapy.

It is important to remember that these treatments do not remove the virus from the body. If the immune system is not able to clear the virus it will remain in the body and it can be spread to others.

Part Two: Immunization for Students

What are vaccines and how do they work?

Vaccines protect you from specific diseases that can make you very sick, disable or even kill you. They boost your body’s own defence system, which is also called the immune system. Vaccines create immunity that protects you from an infection without causing the suffering of the disease itself. Sometimes vaccines are called immunizations, needles or shots. Here’s how vaccines work:

- Most vaccines contain a little bit of a disease germ that is weak or dead. Vaccines do NOT contain the type of germ that makes you sick. Some vaccines do not contain any germs.
- Having this little bit of the germ inside your body makes your body’s defence system build antibodies to fight off this kind of germ. Antibodies help trap and kill germs that could lead to disease.
- Your body can make antibodies in two ways: by getting the disease or by getting the vaccine. Getting the vaccine is a much safer way to make antibodies without having the suffering of the disease itself.
- Antibodies stay with you for a long time. They remember how to fight off the germ. If the real germ that causes this disease (not the
vaccine) enters your body in the future, your defence system knows how to fight it off. 12

- Often, your defence system will remember how to fight a germ for the rest of your life. Sometimes, your defence system needs a booster shot to remind it how to fight off this germ. 12

Sometimes vaccines prevent one disease. Sometimes they are combined to protect you from several diseases with one shot. Most vaccines given in Canada are by injection; others are given by drops into the mouth. 12

**Is there a vaccine to prevent HPV?**

Yes. The HPV vaccine provides almost 100% protection against four types of HPV, two of which are associated with cervical cancer. This vaccine will protect against HPV types 6, 11, 16 and 18. HPV types 16 and 18 are considered high risk for cervical cancer. HPV types 6 and 11 are considered low risk and are associated with genital warts. 4

The vaccine is currently licensed for use in females and males aged 9 to 26 years. The vaccine is publicly funded in the province of Ontario for grade 8 females and is provided through school-based clinics.

The HPV vaccine is given in a series of three doses. The vaccine is given at: 2, and 6 months after the first dose. The manufacturer has also approved an alternative schedule given at: 1, and 4 months after the first dose. This means that the first dose of the series is given at day 0, the second dose at least 1 month after the first, and the third dose is given at least 3 months after the second.

Before introducing a new vaccine to Ontario’s publicly funded immunization program, the province considers the needs of Ontarians; the advice of several immunization expert groups and the safety, efficacy, cost and appropriateness of the specific vaccine for possible administration through Ontario’s publicly funded programs. Completed clinical trials for this vaccine have shown it to be safe and effective. 5
Why should grade 8 females receive the HPV vaccine in school?

The HPV vaccine works best when given before the student becomes sexually active. If a student is already sexually active or has had an HPV infection, immunization is still recommended. Studies show that 20% of all females in Grade 9 and 46% of those in Grade 11 have had intercourse. ¹⁰

What may be expected after receiving the HPV vaccine?

Local reactions may include redness, itchiness, soreness or swelling at the needle site.

Occasionally, nausea, diarrhea, dizziness, and/or slight fever may result.

Severe reactions are very rare and may include trouble breathing, swelling of the face or mouth, hives or fever over 39°C. Report severe reactions to your doctor and Peel Public Health.

How long does the effect of the vaccine last?

The vaccine is almost 100% effective against the four HPV types that the vaccine protects against. Studies have shown good protection for five years after vaccination. ⁴

Will females who have been vaccinated still need cervical cancer screening?

Yes. Although the vaccine provides protection against the four most common types of HPV, it is not a replacement for cervical cancer screening. Regular cervical cancer screening through Pap tests, combined with the vaccine, provide the best protection against cervical cancer. ⁶
Do males need to worry about HPV if their partner has been immunized against HPV?

If your partner has been immunized, it is more likely that they will not have the four HPV strains prevented by the vaccine. But this does not mean males are fully protected from HPV infections. Your partner can still carry other types of the HPV virus. If your partner was sexually active before being immunized, they may have one of the HPV types preventable by the vaccine. Immunization can only prevent, not cure or treat an HPV infection.

In 2010, Health Canada approved HPV vaccination for young men ages nine to 26. Males can now further protect themselves by getting vaccinated. As well, there is still a need to practise safe sex, as your partner can also have other STIs.

Who should not get the vaccine?

A student should not receive the vaccine if she:

- has already been fully vaccinated with the HPV vaccine;
- has had a serious reaction to a previous dose of the HPV vaccine;
- has an allergy to any component of the vaccine (e.g., yeast); or
- is pregnant.

Immunization should be deferred until a later date if the student has a fever or anything more serious than a minor cold.
Activity Three: 
Group work – Discussion about HPV – 20 to 30 minutes
(http://www.hpvinfo.ca/hpvinfo/teachers/lesson-2.aspx)

- Ask the students to form groups of four, two boys and two girls. From the knowledge learned during lesson on HPV, ask the students in each group to develop a list of health consequences of HPV specific to girls and a list of health consequences specific to boys. (Example: cervical cancer, genital warts, etc…)

- Then ask the students to make a list of prevention strategies for girls and a list of prevention strategies for the boys. (Example: get the vaccine, abstinence, etc…)

- Provide an opportunity for group discussion and have the group leader present the results of each group discussion.

- Create a table of the students’ responses on the blackboard, indicating the health consequences of HPV and prevention strategies.

- The educator should discuss the students’ answers and with their help develop a comprehensive list of health consequences specific to girls and boys, and consequences that are common to both boys and girls.

- The educator should share with the students, the information with regards to the burden of illness of HPV that is specific to girls, specific to boys, and to both girls and boys.

- The educator should also provide a synthesis on the burden of illness of HPV and prevention strategies, including immunization.
Glossary

Abstinence – Choosing not to have any kind of sexual activity - this includes vaginal, oral and anal sex. It is the only 100% effective way to prevent pregnancy and STIs. 3

Cervix – The lower part of the woman's uterus, with an opening that connects the uterus to the vagina. 3

Cervical cancer – Cancer that forms in the tissues of the cervix. It is usually a slow-growing cancer that may not have symptoms but can be found with regular Pap tests. Cervical cancer is almost always caused by human papillomavirus (HPV) infection. 8

Condom – Thin covering, usually made of latex rubber, which is put over a man's erect penis during oral, vaginal or anal sex. 3

Genital warts – A very common STI, and appear as skin growths in the groin, genital, or anal areas. They can be different sizes and shapes. Some look like flat white patches, and others are bumpy, like tiny bunches of cauliflower. 9

HPV – Human papillomavirus is a common STI, also known as genital warts or condyloma. There are more than 100 types of HPV. Over 30 different types of HPV affect the genital area. HPV is spread by direct skin to skin contact, usually during oral, vaginal or anal sex. 1

- HPV high-risk type – A type or strain of HPV that leads to a serious health outcome, for example cancer of the cervix, penis, vagina, or anus. 1

- HPV low-risk type – A type or strain of HPV that has a less harmful outcome, for example genital warts. 1

Immunization – Also called injections, vaccinations, or shots; it can mean both receiving a vaccine and becoming immune to ward off a disease as a result of immunization. Immunizations help the body make its own protection (or antibodies) against certain diseases. 7
Glossary

Pap test – A procedure in which cells are scraped from the cervix and looked at under a microscope. It is used to detect changes in the cells of a woman’s cervix. Changes in a woman’s cervix can be an early sign of cancer. It’s important to get a Pap test every year whether or not you’re having sex.

STI (sexually transmitted infection) formerly known as sexually transmitted disease (STD) or venereal disease (VD) – are infectious diseases that are transferred from one person to another through any type of sexual contact (oral, anal and vaginal).

Unprotected sex - Having sex without using some form of birth control and/or protection against STIs.

Vaccine – made from weak or ‘dead’ versions of the viruses or bacteria that cause disease. Vaccines may be given as needles or as drops to be swallowed. Vaccines trick the body to think it is being attacked by a disease. The body responds by producing antibodies that remain in your system. If the body is exposed to the actual disease, it will be protected.

Virus – Tiny organisms that often cause disease; sometimes your body can fight off the virus, sometimes it can not; sometimes a virus stays in your body for the rest of your life but you may not have any symptoms; antibiotics can not treat or cure a virus.
Study Sheet

Abstinence: __________________________________________

Cervix: ____________________________________________

Cervical cancer: _____________________________________

Condom: ___________________________________________

Genital warts: _____________________________________

HPV: ______________________________________________

HPV high-risk type: _________________________________

HPV low-risk type: _________________________________

Immunization: _____________________________________

Pap test: _________________________________________

STI: _____________________________________________

Unprotected sex: ___________________________________

Vaccine: _________________________________________

Virus: ___________________________________________
New Words and Phrases

Read the definitions in the box on the right. Find the term that matches each definition in the box below. Write the matching number on the line beside each definition.

Good Luck!

|-----------|---------|-------|-------------|---------------|------------------|---------------------|-----------------|-------------------|-------------------|

| ________ | ________ | ________ | ________ | ________ | ________ | ________ | ________ | ________ | ________ |
| It is the only 100% effective way to prevent pregnancy and STIs | A type or strain of HPV that has a less harmful outcome, for example genital warts | help the body make its own protection (or antibodies) against certain diseases | The lower part of the woman's uterus, with an opening that connects the uterus to the vagina | A type or strain of HPV that leads to a serious health outcome, for example cancer of the cervix, penis, vagina, or anus | HPV causes changes to the cells of the cervix and leads to this in females | Tiny organisms that often cause disease | A very common STI, and appear as skin growths in the groin, genital, or anal areas | A test that is used to detect changes in the cells of a woman's cervix | A common STI, also known as genital warts or condyloma |
Human Papillomavirus (HPV) Handout

New Words and Phrases– Answer Sheet

Read the definitions in the box on the right. Find the term that matches each definition in the box below. Write the matching number on the line beside each definition.

Good Luck!

1. Cervix
2. Virus
3. HPV
4. Pap test
5. Abstinence
6. Genital Warts
7. HPV high-risk type
8. Immunization
9. HPV low-risk type
10. Cervical cancer

____ 5. It is the only 100% effective way to prevent pregnancy and STIs
____ 9. A type or strain of HPV that has a less harmful outcome, for example genital warts
____ 8. Help the body make its own protection (or antibodies) against certain diseases
____ 1. The lower part of the woman’s uterus, with an opening that connects the uterus to the vagina
____ 7. A type or strain of HPV that leads to a serious health outcome, for example cancer of the cervix, penis, vagina, or anus
____ 10. HPV causes changes to the cells of the cervix and leads to this in females
____ 2. Tiny organisms that often cause disease
____ 6. A very common STI, and appear as skin growths in the groin, genital, or anal areas
____ 4. A test that is used to detect changes in the cells of a woman’s cervix
____ 3. A common STI, also known as genital warts or condyloma

Peel Public Health: Vaccine Preventable Diseases Program
Contact Peel Public Health at 905-799-7700 or visit www.ImmunizePeel.ca
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Please answer these questions in the space below.

1. What does HPV stand for?

2. What are the different ways that HPV is spread?

3. What are some of the signs and symptoms of HPV?

4. How can you tell if someone has HPV?

5. What are some of the health risks if you have HPV and you are a boy?

6. What are some of the health risks if you have HPV and you are a girl?

7. How can a girl prevent HPV?

8. How can a boy prevent HPV?

9. How can a boy or girl reduce the risk of becoming infected with HPV?

10. What are some of the treatments for genital warts and for cancer?
Human Papillomavirus (HPV) Handout

4. ________________________________________________
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10. ________________________________________________
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    _________________________________________________
Homework Assignment

Please answer these questions in the space below.

1. Why should I get the HPV vaccine (girls)?

2. If a girl has an HPV infection, how can this affect her health?

3. HPV affects both boys and girls? (T/F)

4. If a boy has an HPV infection, how can this affect his health?

1. ______________________________________________________
   ______________________________________________________
   ______________________________________________________

2. ______________________________________________________
   ______________________________________________________
   ______________________________________________________

3. T_____ or F_____

4. ______________________________________________________
   ______________________________________________________
   ______________________________________________________
Reference and Resource List

Reference List:

1. Human Papillomavirus (HPV) and HPV Vaccine Fact Sheet (March 2008) Healthy Sexuality Program Resources, Peel Public Health

2. Peel Public Health – Healthy Sexuality: Sexually Transmitted Infections (STI)  
http://www.peelregion.ca/health/sexuality/sti/

3. Peel Public Health – Healthy Sexuality, In the Know Peel  
http://www.intheknowpeel.ca/glossary/index.htm

4. Ministry of Health and Long-Term Care – Ontario's Grade 8 HPV Vaccination Program (HPV Fact Sheet)  

5. Ministry of Health and Long-Term Care – Ontario’s Grade 8 HPV Vaccination Program (Parents HPV FAQ)  

6. Ministry of Health and Long-Term Care – Love Alone Won't Protect Your Grade 8 Daughter from Cervical Cancer Brochure  

7. Ministry of Health and Long-Term Care – Immunization  

8. National Cancer Institute, U.S. National Institutes of Health  
http://www.cancer.gov/cancertopics/types/cervical

9. British Columbia Centres for Disease Control (BCCDC)  
http://www.bccdc.ca/dis-cond/a-z/_g/GentialWartsHPV/Overview/default.htm

10. Society of Obstetricians and Gynaecologists of Canada (SOGC) Website  
http://www.hpvinfo.ca/hpvinfo/home.aspx
Reference and Resource List


Resource List:

http://hpvontario.ca/
Ministry of Health and Long-Term Care – Ontario's Grade 8 HPV Vaccination Program

http://www.hpvinfo.ca/hpvinfo/home.aspx
Society of Obstetricians and Gynaecologists of Canada Website – Order the free toolkit which includes fact sheets for this age group, as well as a free PowerPoint presentation. There are also education and counselling tools as well as a lesson plan for teachers

Public Health Agency of Canada Website – Specific information about the safety and effectiveness of the HPV vaccine

http://www.intheknowpeel.ca/
Peel Public Health Healthy Sexuality Website – part of an awareness campaign educating teens and young adults about sexually transmitted infections (STI), safer sex, birth control and Public Health – Healthy Sexuality Clinics operated by the Region of Peel

http://www.peelregion.ca/health/talk-to-me/preparing/easier.htm
Sexuality education specialists recommend the following advice to teachers who wish to teach sexuality education in a way that makes the experience more enjoyable for both teachers and students.

http://www.peelregion.ca/health/sexuality/index.htm
Peel Public Health Healthy Sexuality Website – general information

http://www.peelregion.ca/health/sexuality/sti/comm-sti.htm
Peel Public Health Healthy Sexuality Website – STIs

http://www.peelregion.ca/health/sexuality/sti/sti-hpv.htm
Peel Public Health Healthy Sexuality Website – HPV

http://www.peelregion.ca/health/talk-to-me/
A sexuality education resource for educators working with youth in Grades 7 & 8

http://www.intheknowpeel.ca/stiaids/faqssti.htm
Peel Public Health Healthy Sexuality Website – FAQs about STIs

Health Canada Website-STIs

http://www.sexualityandu.ca/teachers
Society of Obstetricians and Gynaecologists of Canada Website – aimed at helping teachers and educators to inform students about contraception, prevent STIs and promote sexual well-being within a comprehensive, positive approach to sexuality

http://www.cfsh.ca/Resources/Educational_and_Training_tools/
Canadian Federation of Sexual Health Website

http://www.peelregion.ca/health/sexuality/sti/resources.htm
Peel Public Health Healthy Sexuality Website – Resources

http://www.peelregion.ca/health/talk-to-me/download/lesson-plans/index.htm
Peel Public Health Healthy Sexuality Website – Lesson plans
http://www.peelregion.ca/health/talk-to-me/
Check this website for a manual and lesson plans for teaching sexual health.

Health Canada website on HPV

http://www.cancer.ca/Canada-wide/About%20cancer/Types%20of%20cancer/What%20is%20cervical%20cancer.aspx?
Canadian Cancer Society – cervical cancer