

Preventing Cancer, Increasing Awareness, and  
Starting Conversations.

# Enhancing the School Nurse's Role in the Fight Against Human Papillomavirus (HPV) Cancer

## **Continuing Education**

Southern NH AHEC is an Approved Provider of continuing nursing education by the Northeast Multistate Division (NE-MSD), an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation.



1.0 contact hours. Activity Number: 1253

# Introduction

- Thank you for your interest in learning how you, as the school nurse, can help promote HPV vaccination.
- In order to receive credit for this module, please complete the following PowerPoint presentation, evaluation, and post-test.
- This continuing education module expires December of 2020.
- The Southern NH AHEC partnered with UNH to offer this module.



# Purpose

This educational module was created after a collaborative project with University of New Hampshire (UNH) nursing students and The NH Immunization Program. UNH Nursing Students interviewed a portion of school nurses across NH and found that school nurses desired an educational platform to gain confidence with speaking to students and parents about not only HPV Cancer, but the HPV vaccine.

- This online module was developed in the fall of 2017 by Senior Nursing Students in a Public Health Course in the Nursing Program, University of New Hampshire, Durham, NH.
- The students: Chris Montana, Cameron Patridge, Hailee Miller, and Riley Kingsbury. Assisted by Rosemary Taylor, PhD, RN, CNL, Assistant Professor. Department of Nursing, University of New Hampshire, Durham and Alyssa J. O'Brien, PhD, RN, Assistant Professor, Department of Nursing, University of New Hampshire, Durham
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# Disclosure

- This module was funded in part by the National AHEC Organization and Centers for Disease Control.
- The creators and planners for **Enhancing the School Nurse's Role in the Fight Against Human Papillomavirus (HPV) Cancer**, have reported no significant financial relationship with any company(s) whose product may be germane to the content of their presentations, or which are supporting this program, and no discussion of off label uses.

# Objectives

- At the completion of this module, school nurses will:
  - Recognize the school nurses' role in promoting vaccination
  - Identify the cancers caused by HPV infections
  - Identify common misconceptions associated with HPV vaccination
  - Apply effective communication techniques regarding conversations with parents.



# Understanding the Burden

HPV Transmission, Infection &  
Cancer

# HPV Transmission

- HPV exposure can occur with any type of intimate sexual contact
- Intercourse is not necessary to become infected
- **FACT:** 40% of high school students have already engaged in sexual (vaginal-penile) intercourse(2017)
  - 10% had four or more sexual partners.
  - 7% had been physically forced to have sexual intercourse when they did not want to.

# HPV Infection

- Almost all females and males will be infected with at least one type of HPV infection at some point in their lives
  - Estimated 79 million Americans currently infected
  - 14 million new infections/year in the US
  - 33,700 cancer diagnoses attributable to HPV each year
  - HPV infection is most common in people in their late teens and early 20s

# PAP TEST

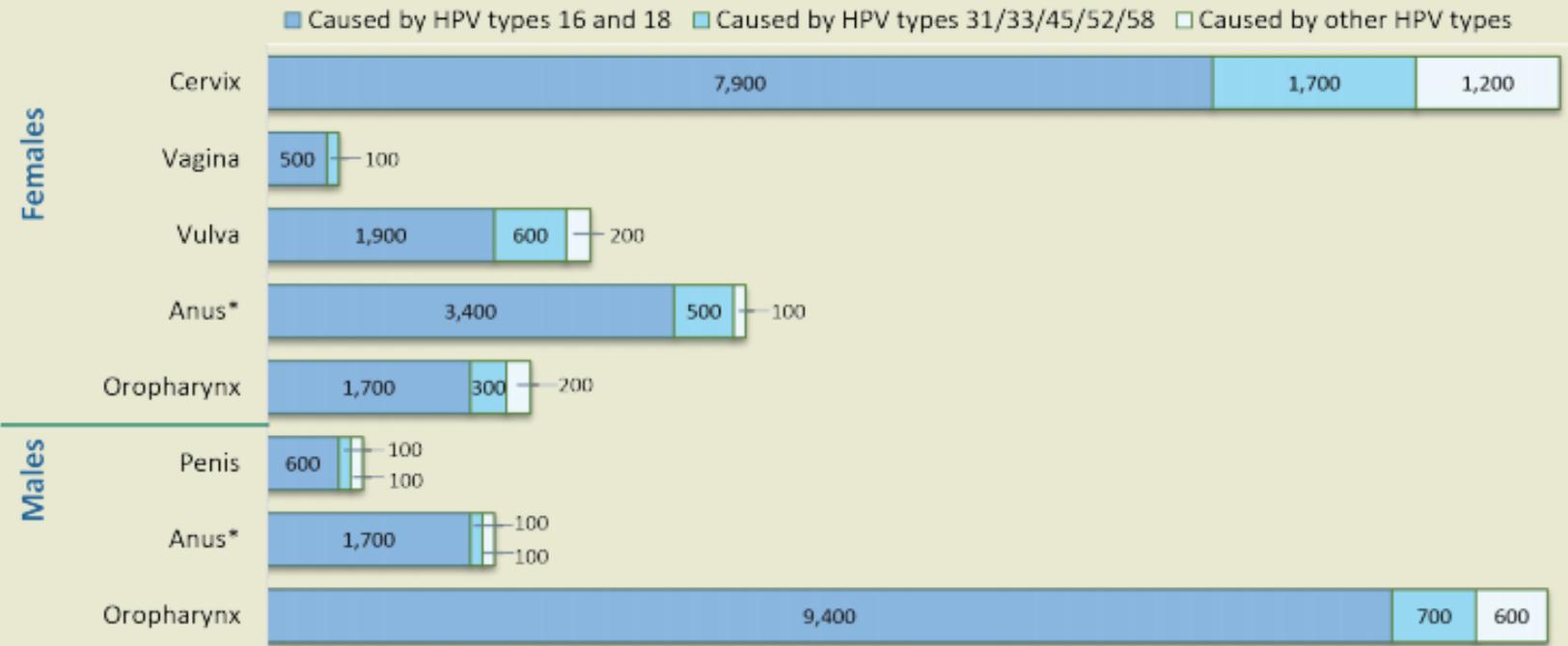
- The **Pap test** (also known as the **Pap smear**) is a simple and effective way of checking cells from your cervix to see if they are normal or abnormal. Some abnormal cells can develop into cancer. The **HPV test** is used to look for human papillomavirus (**HPV**) in the cells from your cervix. **HPV** is the cause of cervical cancer.

# HPV Associated Cancers

Take a look at the next slide.

Notice how oropharyngeal cancers have surpassed cervical cancers.

## Estimated number of cancer cases attributable to HPV by sex, cancer type, and HPV type



For each cancer type, we estimated **HPV-attributable** cancers by multiplying the number of cancer cases by the percentage attributable to HPV based on a genotyping study. We estimated that 33,700 cancers (79%) were attributable to HPV each year during 2011–2015. Of these, we estimated that 31,200 cancers could have been prevented by the 9-valent HPV vaccine, including 27,100 caused by HPV types 16 and 18, and 4,100 caused by HPV types 31/33/45/52/58. HPV-negative cancers are not shown in the graph; it is estimated that about 10% of cervical and anal cancers, 30% of oropharyngeal, vaginal, and vulva cancers and 40% of penile cancers are HPV-negative.

**HPV vaccination** is recommended for girls and boys 11 to 12 years old, and for females through age 26 and males through age 21 who did not receive the HPV vaccine when they were younger. HPV vaccination may be given to males age 22 through 26, and is recommended for some males in this age group.

<https://www.cdc.gov/cancer/hpv/pdf/USCS-DataBrief-No4-August2018-508.pdf>

# HPV-Associated Cancers in NH

Oropharyngeal HPV Cancer surpassed Cervical Cancer

Cancer site	1999-2013			Percent of cases probably caused by HPV*	Number of cases probably caused by HPV during 1999-2013 time period		
	Male	Female	Both Sexes		Male	Female	Both Sexes
	n	n	n		n	n	n
Anus	107	202	309	91%	97	184	281
Oropharynx	748	206	954	72%	539	148	687
Cervix		624	624	91%		568	568
Vagina		49	49	75%		37	37
Vulva		248	248	69%		171	171
Penis	67		67	63%	42		42
<b>TOTAL</b>	<b>922</b>	<b>1,329</b>	<b>2,251</b>		<b>678</b>	<b>1,108</b>	<b>1,786</b>

Source: New Hampshire State Cancer Registry, 1999–2013

\*Based on CDC estimates

# Summary Points

- Anyone who has ever had sex can have an HPV infection that may turn into HPV cancer.
- HPV is so common that four out of five people will have had HPV at some time in their lives.
- In most cases, the infection clears up by itself in one to two years.
- If left undetected, HPV may lead to cancer – this usually takes about 10 years.
- A Pap Smear is the only test that can detect HPV infection in women. There are no test for men.
- A Pap smear every two years can detect the presence of HPV, which can then be monitored or treated to prevent cancer.



# The HPV Vaccine

Understanding the vaccine  
recommendations,  
and how to respond to parent questions.

# The HPV Vaccine Works

- Maximal reductions of approximately
  - 90% for HPV 6/11/16/18 infection
  - 90% genital warts
  - 45% for low-grade cytological cervical abnormalities
  - 85% for high-grade histologically proven cervical abnormalities have been reported

<https://www.ncbi.nlm.nih.gov/pubmed/27230391/>

# Rates for Tdap, HPV, MMR, and polio vaccines in New Hampshire

- Currently, the state's vaccination rate for the 1st dose of HPV is 74.2% in our male and female population. (II-NIS Coverage 2017 ) Other childhood vaccines, such as MMR, Polio, and Tdap are well over 80%
  - HPV vaccine is not required for school by the state of NH even though it is one of the only vaccines that directly prevents cancer.
- How do we get HPV to 80%?
  - Recommend HPV vaccine the same way, same day as other adolescent vaccines
  - Implement systems to ensure you never miss an opportunity to vaccinate
  - Starting conversations, breaking stigmas, and redirecting the focus towards **CANCER PREVENTION**.
  - (For NH HPV rates see chart on next slide)

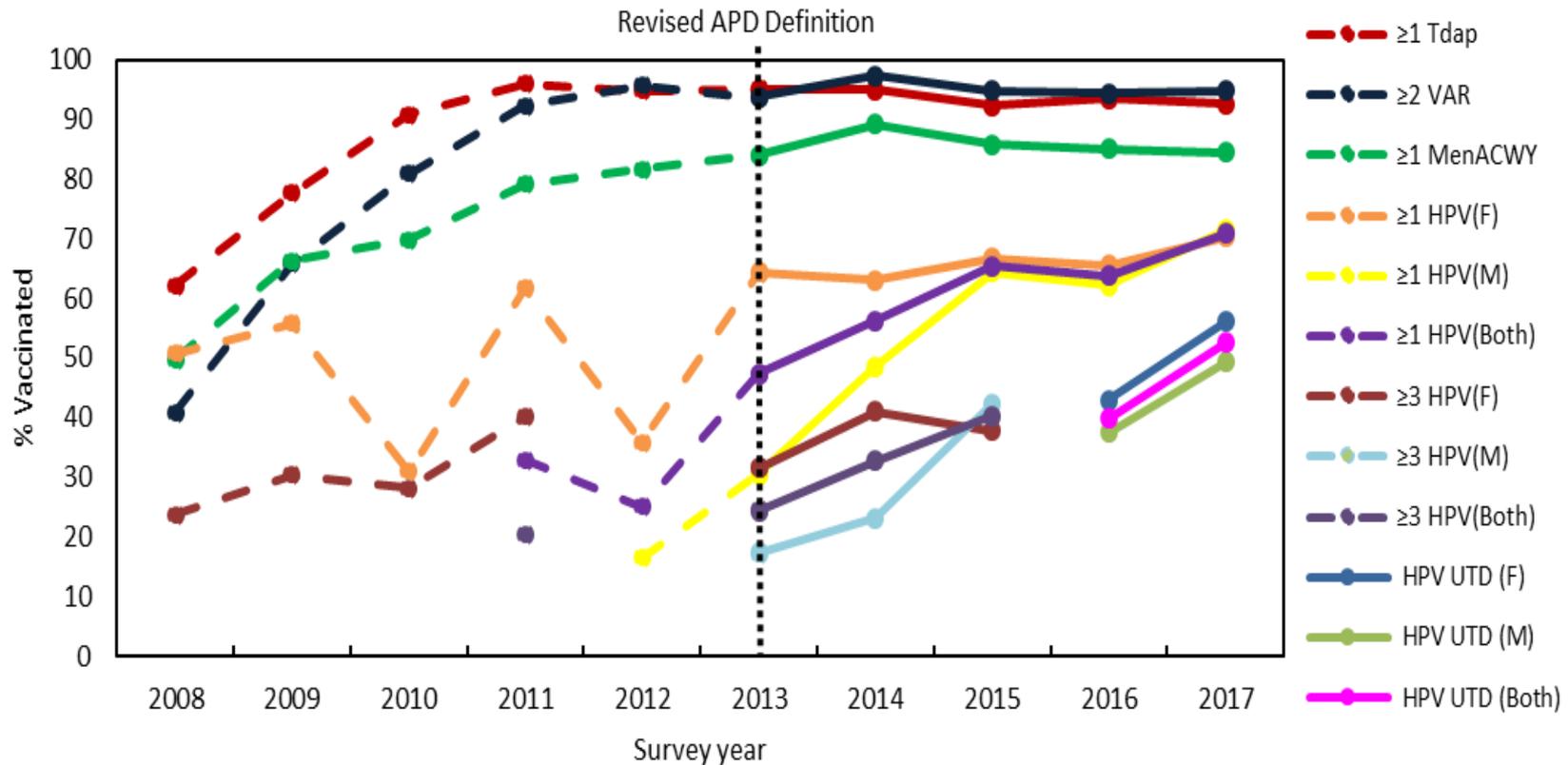
# NH HPV Vaccination Rates

## II. Vaccination coverage among adolescents aged 13-17 years

Estimated vaccination coverage\* with selected vaccines and doses among adolescents aged 13–17 years<sup>†</sup> United States, HHS Region I and Immunization Survey–Teen (NIS-Teen), United States, 2016-2017.

	Females and Males				Females		Males	
	≥1 Tdap <sup>§</sup>	≥1 MenACWY <sup>¶</sup>	≥1 HPV <sup>**</sup>	HPV UTD <sup>††</sup>	≥1 HPV <sup>**</sup>	HPV UTD <sup>††</sup>	≥1 HPV <sup>**</sup>	HPV UTD <sup>††</sup>
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
<b>US overall</b>								
<b>2016</b>	88.0(±0.9)	82.2(±1.0)	60.4(±1.2)	43.4(±1.3)	65.1(±1.7)	49.5(±1.9)	56.0(±1.7)	37.5(±1.7)
<b>2017</b>	88.7(±0.9)	85.1(±0.9) ***	65.5(±1.2) ***	48.6(±1.3) ***	68.6(±1.7) ***	53.1(±1.9) ***	62.6(±1.6) ***	44.3(±1.7) ***
<b>HHS REGION I</b>								
<b>2016</b>	94.8(±1.3)	90.8(±1.9)	69.9(±3.1)	55.0(±3.3)	74.9(±4.0)	61.0(±4.7)	65.1(±4.5)	49.3(±4.7)
<b>2017</b>	94.6(±1.3)	92.5(±1.6)	78.2(±2.7) ***	63.3(±3.2) ***	81.6(±3.6) ***	66.2(±4.6)	75.1(±3.9) ***	60.5(±4.4) ***
<b>New Hampshire</b>								
<b>2016</b>	95.3(±2.8)	88.0(±4.2)	69.9(±5.9)	51.2(±6.7)	70.6(±8.1)	56.5(±9.1)	69.3(±8.6)	46.3(±9.6)
<b>2017</b>	95.1(±2.7)	87.9(±4.3)	74.2(±5.4)	59.9(±6.1)	75.2(±7.2)	63.0(±8.2)	73.3(±7.9)	56.9(±9.0)

# HPV Vaccine compared to other adolescent vaccines. Tdap and Meningococcal rates are much higher!



# ACIP Recommendation and AAP Guidelines for HPV Vaccine

- Routine HPV vaccination recommended for both males and females ages 11-12 years
  - Catch-up ages 13-21 years for males; 13-26 for females
  - Permissive use ages 9-10 years for both males and females; 22-26 for males

For more information: <https://www.cdc.gov/mmwr/volumes/65/wr/mm6549a5.htm>

In October 2016 CDC Recommended a slight change in who should get two shots instead of three.

CDC now recommends:

Girls and boys who initiate the vaccine series at ages 9 through 14 only need 2 shots

- Administered at intervals 0 and 6 months

Series started 15 and older still need 3 shots

- Administered at intervals 0, 2 and 6 months

## What is available to preteens and adolescents in NH?

HPV vaccine (Gardasil 9) is a 9-valent vaccine. It is recommended for girls and boys at age 11 or 12 years for prevention of HPV cancers.

- HPV 9 contains types 6, 11, 16, 18, 33, 45, 52, 58
- The Most common types that cause cancer are  
16 & 18

# Why is the HPV vaccine different from other adolescent vaccines?

- HPV vaccine issues sensationalized by popular media
- Different reasons for why some girls and boys don't get the first shot and why some don't finish all 3 shots
- Parents think sexuality instead of cancer prevention
- SOME clinicians aren't giving strong recommendations(all vaccines ARE created equal)
- Parents have questions that are seen as hesitation by some doctors
- Phased girls-then-boys recommendations initially confusing to parents
- System interventions to improve coverage rates depend on clinician commitment



# Talking about HPV Vaccine at Your School

## Framing the conversation

# REMEMBER HPV VACCINE IS AN ANTI-CANCER VACCINE!!!

- The “HPV vaccine is cancer prevention” message resonates strongly with parents

*HPV vaccine is very important because it prevents cancer.*

*I want your child to be protected from cancer.*

*I know you want to do everything you can to keep \*insert name\* safe, and so do I. That's why I'm recommending that your daughter/son receive the HPV vaccine.*

# Why You?

- School Nurses have a unique opportunity to answer clinical questions from parents and students. You are a valued member of the of the schools healthcare team.
- You have the opportunity to add your professional knowledge to explain the benefits of the HPV vaccine, its prevalence, and the dangers of HPV cancer.

# How Can School Nurses Help?

1. Give a **STRONG** recommendation
  - Ask yourself, how often do you get a chance to prevent cancer?
2. Start conversation early and focus on **cancer prevention**
  - Vaccination given well before sexual experimentation begins better antibody response in preteens
3. Offer a **personal story**
  - Own children/Grandchildren/Close friends' children
  - HPV-related cancer case
4. Welcome **questions** from parents, especially about safety
  - Remind parents that the HPV vaccine is safe and not associated with increased sexual activity

# What's in a recommendation?

- Studies consistently show that a strong recommendation from a health care provider is the single best predictor of vaccination
  - In focus groups and surveys with moms, having a doctor recommend or not recommend the vaccine was an important factor in parents' decision to vaccinate their child with the HPV vaccine
  - Not receiving a recommendation for HPV vaccine was listed a barrier by mothers

*Tips on #howIrecommend the HPV vaccine*

- <https://www.cdc.gov/hpv/hcp/how-i-recommend.html>
- <https://www.cdc.gov/hpv/hcp/answering-questions.html>

# A case of vaccine hesitancy?

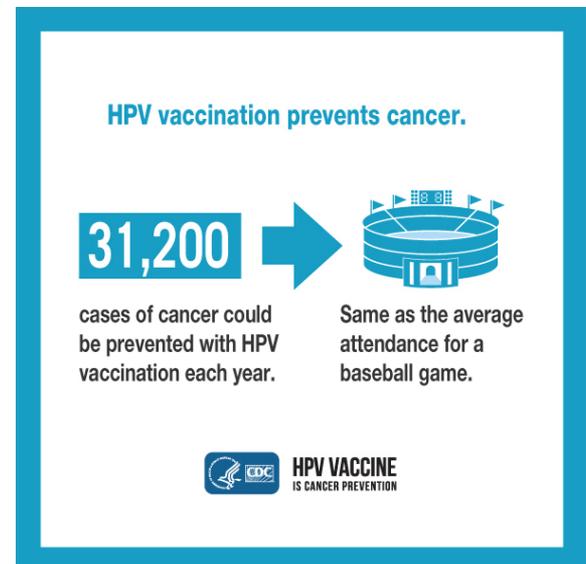
- Parents may be interested in vaccinating, yet still have questions
  - Many parents didn't have questions or concerns about HPV vaccine
  - A question from a parents does not mean they are refusing or delaying
  - Taking the time to listen to parents' questions helps you save time and give an effective response
  - CDC research shows these straightforward messages work with parents when discussing HPV vaccine—and are easy for you or your staff to deliver

# Parent HPV Questions

- Why necessary at age 11-12?
- How safe is the vaccine?
- What about the side effects?
- Will my child become sexually active after vaccination?

# Parent question: Why is it necessary to vaccinate my 11 year old now?

Answer: For HPV vaccine to be most effective, the series should be given prior to exposure to HPV cancer. If you wait until your child is older, he/she may end up needing three shots instead of two. HPV vaccine produces a better immune response in preteens than it does in older individuals.

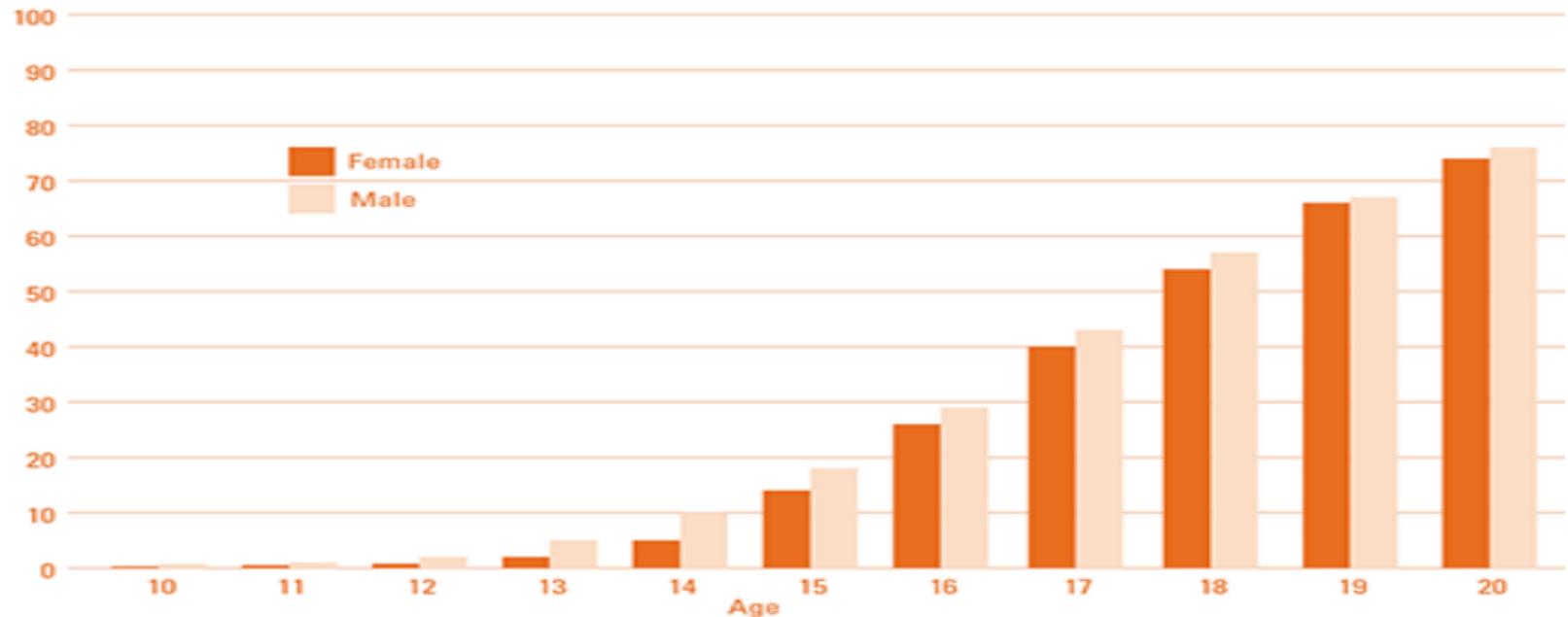


# Rationale for vaccinating early: Protection prior to exposure to HPV

## Teen Sexual Activity

Adolescence is a time of rapid change.

% of adolescents who have had sex by each age



www.guttmacher.org

# Question: Is HPV Vaccine Safe?

- Answer: **YES!**
- The HPV vaccine has been on the market since 2006.
- 270 million doses of HPV vaccine have been given world wide as of May 2017. Like any medication or injection there may be common mild side effects.
- The most common adverse events reported:
  - Headache
  - Syncope (fainting)
  - Fever
  - Nausea
  - Injection site reaction (Pain, redness, swelling)
- How CDC monitors the safety of HPV vaccines:
  - CDC and FDA monitor the safety of vaccines after they are licensed. Any problems detected with these vaccines will be reported to health officials, health care providers, and the public.
- For more information about vaccine safety:  
<https://www.cdc.gov/vaccinesafety/vaccines/hpv-vaccine.html>

# Question: What about the side effects?

- Like any medication, vaccines can cause side effects, including pain, swelling, or redness where the shot was given.
- The most common adverse events reported for the HPV vaccine:
  - Headache
  - Syncope (fainting)
  - Fever
  - Nausea
  - Injection site reaction (Pain, redness, swelling)
  - The following should go away in a day or two.

Adolescents who have severe allergy to yeast or any other ingredient in the vaccine should not receive the HPV vaccine.



**Question/statement: I'm worried my child will think that getting this vaccine makes it OK to have sex!**

**Facts: Multiple research studies have shown that getting the HPV vaccine does not make kids more likely to start having sex.**

- **Feel free to reference:  
<https://www.cdc.gov/hpv/hcp/for-hcp-tipsheet-hpv.pdf>**

## Answers:

*We don't wait until exposure occurs to give any other routinely recommended vaccine. The HPV vaccine should be treated equally. For HPV vaccine to be most effective, the series should be given prior to exposure to HPV at 11 or 12 years old. There is no reason to wait to vaccinate until teens reach puberty or start having sex.*

# The Cost

- The New Hampshire Immunization Program provides all recommended childhood vaccines for NH residents 18-years-old and under at no cost to the patient .
- Most Pediatric and Family Medicine Providers carry the vaccine under this program.

\*Uninsured and Medicaid patients may be charged and administration fee of 22.02 or less.)

# Remind parents about getting the next dose/s.

- Many parents do not know that the full vaccine series requires only 2 shots if started before the age of 15.
- Your reminder might help them to complete the series.

# References

- Center for Disease Control (2016). Human Papillomavirus (HPV) - Questions and Answers.

<https://www.cdc.gov/hpv/parents/questions-answers.html>

- CDC. (2017, August 24). HPV Vaccination Coverage Data. Retrieved September 29, 2017, from

<https://www.cdc.gov/hpv/hcp/vacc-coverage.html>

- (Sexual Risk Behaviors: HIV, STD, & Teen Pregnancy Prevention, 2018)

<https://www.cdc.gov/healthyouth/sexualbehaviors/>

# Post-Test

- Now that you've completed the module, please take a moment to follow this [link](#) and complete the evaluation and post-test. A separate link will be provided at the end of the post-test to obtain your certificate.
- Questions? Please contact [nurseplanner@snhahec.org](mailto:nurseplanner@snhahec.org)