

# UVM ScholarWorks

## HPV Education and Prevention Amongst Danbury High School Students

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Authors	Cochrane, Elizabeth
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HPV Education and Prevention Amongst Danbury High School Students

**Elizabeth Cochrane**

University of Vermont College Medicine c/o 2017

Family Medicine Rotation #1 (March-May 2015);  
Danbury, CT

In Collaboration With:

**Daniel Pearson**

**Kathleen McCoy, A.P.R.N.**

**Kathleen O'Dowd, RN, BSN**

# Problem Identification and Description of Need

- After discussing local doctors and nurses, I decided that HPV would be a good topic to talk about with the high school students because they are within the age range for vaccine eligibility, are most likely younger than the age group (females 20-24y/o) that has the highest prevalence of HPV infection, and they can educate their peers on HPV and HPV vaccination.
- After discussing with a local nurse, I realized that there is a need for HPV education within the student body of Danbury High School because many students do not see physicians regularly and the students are only required to take 1 semester of health class; both of which are settings where the students may be educated about HPV, the complications of an unresolved HPV infection, methods of reducing HPV transmission, and HPV vaccinations.

# Public Health Cost and Unique Cost Considerations in Host Communities

## Nationally

- HPV is the most prevalent sexually transmitted infection in the US
- About 79 million people in the US are currently infected, with 14 million people newly infected yearly
- 75-80% of sexually active adults will have a genital HPV infection by the time they turn 50 years old
- New diagnosis of HPV-provoked cancers annually is 26,900: 10,400 cases of cervical cancer, 4,000 cases of anal cancer, 9,000 cases of oropharyngeal cancer, 700 cases of penile cancer, 600 cases of vaginal cancer, and 2,200 cases of vulvar cancer.

## Connecticut

- HPV vaccination is not a mandated vaccine for school
- CT has an estimated 37.7-44.9% vaccination rate in females ages 13-17 as of 2013
- Cancer Rates due to HPV per 100,000 as of 2006-2010 in Connecticut
  - Cervical cancer 4.37-6.65, vulvar cancer 0.99-1.86, vaginal cancer 0.41-0.47, penile cancer 0.71-0.85, anal cancer in males 0.95-1.12, anal cancer in females 0.94-1.60, oropharyngeal cancer in males 5.62-6.34, oropharyngeal cancer in females 0.73-1.35,

# Community Perspective on Issue and Support for Project (2 interviews) 4a

## **Local Nurse:**

- “I think the education piece for HPV is key because a lot of these students don’t have annual physical exams where they can discuss HPV with their doctor or even be offered the HPV vaccine. Connecticut only requires annual physicals for entry into Kindergarten, 6<sup>th</sup> grade, and 9<sup>th</sup> grade and for some of our students, these are the only times they see a doctor.”
- “I think educating the students on the prevalence, severity, and complications of an HPV infection is very important because a lot of these students think ‘this will never happen to me’ or have not even given HPV the time of day because it is not a mandated vaccine for school.”

# Community Perspective on Issue and Support for Project (2 interviews) 4b

## Local Nurse #2:

- “It is a no-brainer vaccine. It is an anti-cancer vaccine. Parents need to understand that they have to give it to their children now in order to protect them in the future when they are in their 40s-60s.”
- “The biggest obstacle I face when recommending the vaccine is with the parents. In many cases, the parents are making the decisions for these young children and the parents also need to be educated about HPV. They need to know that HPV can be a serious infection. They need to know that there is no data suggesting that the HPV vaccine will make their kids become sexually active at a younger age. There should not be any hesitancy with this vaccine. The parents and children really need to be educated on HPV and the HPV vaccine so that they understand how important this vaccine really is.”

# Intervention and Methodology (5a)

- My main objective was to educate high school students (students who are in the age range for the HPV vaccine) about HPV infections and why HPV infections should be taken seriously even though you may not show symptoms of an infection.
- I conducted a 20 minute presentation on HPV that educated the students on the following concepts: what HPV is, how HPV is spread, what people can do to reduce their risk of contracting HPV, HPV vaccination, and the complications of unresolved HPV infections.
- Students completed a pre and post interaction survey consisting of the same multiple choice questions regarding HPV. This survey was used to assess how much the students learned during the presentation. The post survey also contained questions about future presentation and directions.

# Intervention and Methodology (5b)

## HPV Pre-Survey

1. What is the most common sexually transmitted infection in the US?  
gonorrhea      chlamydia      human papillomavirus      syphilis
2. How many people in the US are infected with HPV? (current US population 318.9 million)  
79 million      20 million      150 million      200 million
3. How is HPV transmitted?  
Genital contact, oral sex, anal sex, vaginal sex      respiratory droplets      water contamination      food contamination
4. If a person is not showing signs or symptoms of HPV, can they still spread the virus?  
yes      no
5. In females aged 20-24, what percentage do you think are infected with HPV?  
10%      25%      45%      65%
6. In sexually active heterosexual males of any age, what percentage do you think is infected?  
10%      25%      45%      64%
7. Is HPV treatable?  
yes      no
8. Is there a vaccine for HPV for males and females?  
yes      no
9. Which age group of males and females do you think has the highest percentage of infections?  
14-19      20-24      25-29      30-39

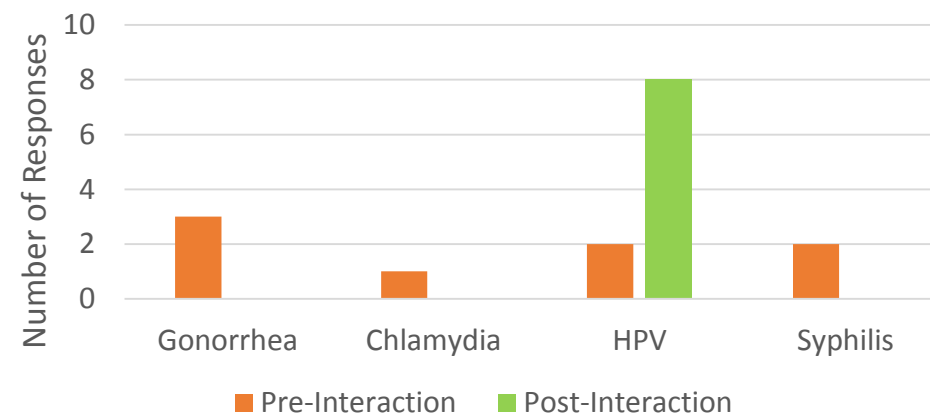
## HPV Post-Survey

1. What is the most common sexually transmitted infection in the US?  
gonorrhea      chlamydia      human papillomavirus      syphilis
2. How many people in the US are infected with HPV? (current US population 318.9 million)  
79 million      20 million      150 million      200 million
3. How is HPV transmitted?  
Genital contact, oral sex, anal sex, vaginal sex      respiratory droplets      water contamination      food contamination
4. If a person is not showing signs or symptoms of HPV, can they still spread the virus?  
yes      no
5. In females aged 20-24, what percentage do you think are infected with HPV?  
10%      25%      45%      65%
6. In sexually active heterosexual males of any age, what percentage do you think is infected?  
10%      25%      45%      64%
7. Is HPV treatable?  
yes      no
8. Is there a vaccine for HPV for males and females?  
yes      no
9. Which age group of males and females do you think has the highest percentage of infections?  
14-19      20-24      25-29      30-39
10. Did you learn something today?  
definitely      somewhat      neutral      not really      definitely not
11. After this session, are you more likely to talk to your friends about getting vaccinated for HPV?  
definitely yes      somewhat      neutral      not really      definitely not
12. Would you like more sessions like this on other sexually transmitted infections?  
yes      no
13. What could be done to improve this interaction?  
comments:

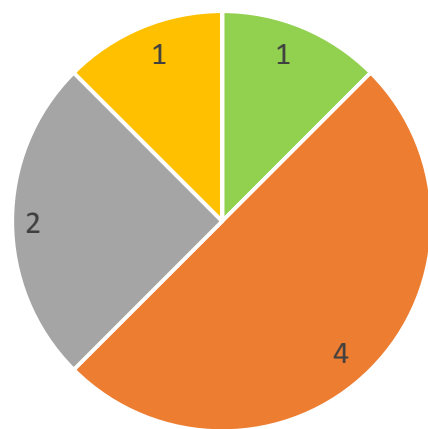
# Results/Response (6)

- Students were given the pre-interaction and post-interaction surveys.
- All students completed the surveys.
- 8 students (6 females, 2 males)

What is the most common STI in the US?

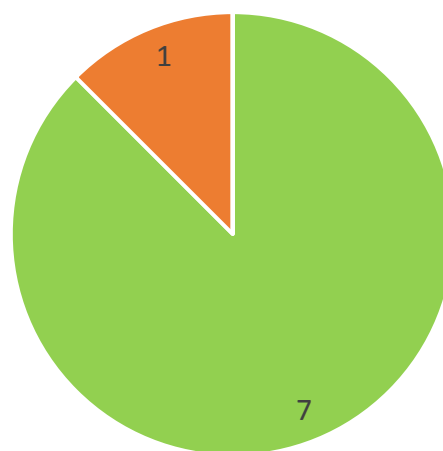


Are you more likely to talk to your friends about HPV?



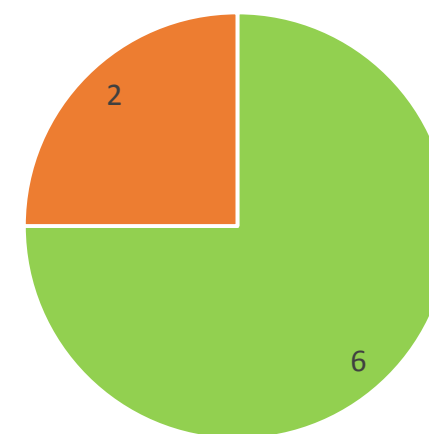
■ Definitely    ■ Somewhat    ■ Neutral  
■ Not Really    ■ Definitely Not

Did you learn something today?



■ Definitely    ■ Somewhat    ■ Neutral  
■ Not Really    ■ Definitely Not

Would you like similar sessions on other STIs?



■ Yes    ■ No

# Evaluation of Effectiveness and limitations (7)

- My advisor and the High School Biology Teacher both expressed that the presentation was very relevant to the students and that it was a great way to introduce the students to the complications of HPV, ways to reduce HPV transmission, and HPV vaccination.
- Students were engaged, regularly asked questions, and all took HPV informational pamphlets.
- Students were a biased, pre-selected group as they were members of the Medicine Student Interest Group.
- Limited sample size (8). This may have been because it was the first day back from spring break and that i. students could still be away and ii. students either forgot the club was meeting that Monday and/or could not get a ride home after the club meeting (could only get a ride home immediately after school).

# Recommendations for future interventions/projects (8)

- Start targeting students at younger ages such as 9 which is the earliest age for male and female HPV vaccine eligibility.
- Start targeting parents because they are the ones primarily making the health care decisions for the younger children. This can be done on Back to School nights, at local community centers such as the YMCA, in collaboration with local pediatricians and family medicine doctors, etc.
- Educate students and parents on where they can get the vaccine and what/if any financial support is available.

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