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2020

## Addressing Common Concerns About HPV Vaccination

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Eapen, Gia R., "Addressing Common Concerns About HPV Vaccination" (2020). *Family Medicine Clerkship Student Projects*. 604.

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01



# ADDRESSING COMMON CONCERNS ABOUT HPV VACCINATION

Brookfield, Connecticut

Gia Eapen, MS3

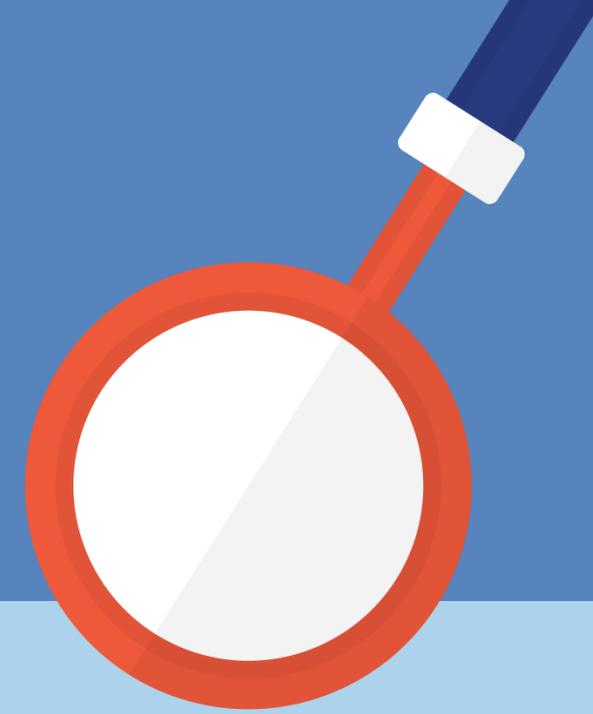
September 2020

Mentor: Laurie Schedgick-Davis, MD

University of Vermont Larner College of Medicine

# Problem identification and description of need

02A



**HPV is the most common sexually transmitted infection in the United States.<sup>1</sup>**

80% of people will get an HPV infection in their lifetime.<sup>2</sup>

**HPV infection causes cancer.<sup>3</sup>**

HPV infection is associated with cervical, head and neck, anal, vulvar and vaginal, and penile cancer.<sup>3</sup> In the United States, HPV causes around 35,000 cases of cancer in men and women each year.<sup>2</sup>

**The HPV vaccine is the only vaccine that can prevent cancer.<sup>4</sup>**

HPV vaccination could prevent 90% of HPV-associated cancers (around 33,000 cases) from ever developing.<sup>4</sup>

# Problem identification and description of need

02B



**The HPV vaccine is not required by school districts.<sup>7</sup>**

The HPV vaccine is not included in the requires vaccinations for Connecticut schools.<sup>7</sup>

**There are many misconceptions about the HPV vaccine.<sup>11</sup>**

Parents cited the need for more information, concerns about the vaccine's effect on sexual behavior, perceived low risk of HPV infection, cost, social influences, and limited preventative care as common barriers to HPV vaccination.<sup>11</sup> Healthcare professionals cited financial concerns and parental concerns as common barriers to providing the HPV vaccine to their pediatric patients.<sup>11</sup>

# Public health cost and unique cost considerations in host community

03A

**Current HPV vaccination protocol saves approximately \$35,000 per quality adjusted life year (QALY)<sup>10</sup>**

Expanding vaccination of adults through age 45 does not have favorable cost-effectiveness.<sup>10</sup>

**54.7% of CT females 13-17 are up-to-date for HPV vaccine<sup>5</sup>**

Although this meets the Healthy Connecticut 2020 goal of 52.3%,<sup>6</sup> it does not meet the Healthy People 2020 goal of 80%.<sup>9</sup>



# Public health cost and unique cost considerations in host community

03B

Number of children with medical and religious exemptions to immunizations<sup>8</sup>



Fairfield County has the highest number of school-enrolled children with medical and religious exemptions to immunizations compared to other counties in Connecticut.<sup>8</sup>

04

# Community perspective on issue and support for project



**Laurie Schedgick-Davis, MD**

"The problem is that the HPV vaccine isn't required by the school district. This is a big issue, especially in this community, since many parents cite that as a reason to refuse or delay the HPV vaccine."



**Darlene Benson, RN**

"Something that most people don't realize is that basically everyone gets HPV at some point."

# Intervention and methodology

05A

## Step 1

Subjective data on challenges to vaccination in host clinic and objective data on vaccination rates in Connecticut were collected.

## Step 2

Literature on national HPV infection rates, national vaccination goals, and common barriers to vaccination was reviewed.

## Step 3

An educational handout was developed based on the identified need to address parents' concerns surrounding the efficacy and safety of the HPV vaccine.

# HPV vaccination handout for parents

05B

# Intervention and methodology

## WHY SHOULD MY CHILD GET THE HPV VACCINE?

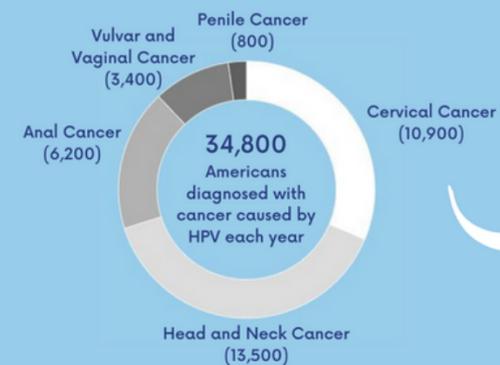
### HPV INFECTION IS COMMON.

**80%** of people will get an HPV infection in their lifetime.

**80 million** Americans are currently infected with HPV.

**14 million** Americans, including teens, become infected with HPV each year.

### HPV INFECTION CAUSES CANCER.



Even with screening, HPV causes 10,900 cases of cervical cancer each year in the U.S. Every year, 4,000 people die of cervical cancer.

### THE HPV VACCINE IS CANCER PREVENTION.

**TWO DOSES** before the age of 15

**THREE DOSES** between ages 15 - 26

- Recommended Schedule:
- Dose #1: age 11 - 12
  - Dose #2: 6 - 12 months later



### IS THE HPV VACCINE NEW?

HPV vaccines were first introduced in the United States in 2006. Since then, there have been more than 120 million doses of HPV vaccines given in the US. Since 2016, the Gardasil® 9 vaccine is the only HPV vaccine available in the US.

### IS THE HPV VACCINE SAFE?

There are **no confirmed adverse effects** of the HPV vaccine. The most common side effect is fainting, which is more common among adolescents getting any vaccine.

Gardasil® 9, the only HPV vaccine available in the US, has been studied in clinical trials of over 15,000 females and males before its release and we have 14 years of safety data collected after its release. As with all vaccines, the CDC and FDA monitor the safety of vaccines and any safety concerns are reported to health officials, providers, and the public.

The HPV vaccine does not cause HPV infection or cancer. The vaccine is made from a protein from the virus and is not infectious, meaning it cannot cause HPV or cancer. There is no evidence to suggest that the HPV vaccine causes fertility problems.

### IF MY CHILD WILL GET SCREENED FOR CERVICAL CANCER LATER, WHY SHOULD THEY GET THE HPV VACCINE TODAY?

HPV causes five other cancers that do not have recommended screening tests. These other types of HPV cancers might not even be found until they start causing health problems. The HPV vaccine prevents these cancers from ever forming.

### IS THE HPV VACCINE EFFECTIVE?

Among teen girls, infections with the types of HPV that cause most HPV cancers and genital warts have dropped by 86%.

Among young adult women, infections with the types of HPV that cause most HPV cancers and genital warts have dropped by 71%.

Among vaccinated women, the percentage of cervical pre-cancers by the types of HPV most often linked to cervical cancer has dropped by 40%.

HPV is estimated to cause nearly 35,000 cases of cancer every year in the US. HPV vaccination can **prevent more than 32,000 of these cancers from ever happening.** That's the same as the average attendance for a baseball game.

### WHY DO BOYS NEED THE HPV VACCINE?

The HPV vaccine can help protect against infections that can lead to cancers of the penis, anus, head, and neck in men. There aren't recommended screening tests available for these cancers, so they may not be found until they start causing serious health problems.

### I'M WORRIED MY CHILD WILL THINK THAT GETTING THE HPV VACCINE MAKES IT OK TO HAVE SEX.

Studies tell us that getting the HPV vaccine **doesn't** make kids more likely to start having sex. Your child should get the HPV vaccine before they start having sex, so that they are protected against HPV infection when the time comes.

Source: Centers for Disease and Control and Prevention



# 06

## Results and response (qualitative)

### MD

"This will be a useful way to address parents' concerns and give them something tangible to take home and read through."

### RN

"I think this is so important. The statistics at the top will catch peoples' attention. That's what parents need to see."

### RN

"I like the way it is written. It's clear and easy to read. There is good focus on numbers and statistics, which is helpful."

### APRN

"People will be particularly surprised by the incidence of Head and Neck Cancer. I think that's a really important one to consider."

# Evaluation of effectiveness



07A

## Vaccination rates

HPV vaccination rates at Brookfield Primary Care and Pediatrics can be measured after implementation of the handout, and compared to vaccination rates before implementation.

## Interest in receiving handout

Parent interest in receiving the handout can be evaluated and reported as number of parents willing to accept the handout / number of handouts offered.

## Willingness to change mind

Parent willingness to change their mind about the HPV vaccine can be evaluated and reported as HPV vaccination rate in children whose parents accepted handout / number of handouts given.

# Limitations of this project



07B

## Short time frame

Due to the short time frame of this project, pre- and post-handout HPV vaccination rates were unable to be measured.

## Lack of parent feedback

Feedback from parents who receive the handout was unable to be assessed. There may be superior methods to deliver this information to parents.

## Limited barrier identification

The handout addresses a limited number of obstacles to HPV vaccination, and does not address cost concerns, transportation or scheduling concerns, etc.

# Recommendations for future interventions and projects



## Development of alternative methods of information communication

Alternative methods of presenting information about the HPV vaccine could be developed, including posters or graphics for social media.

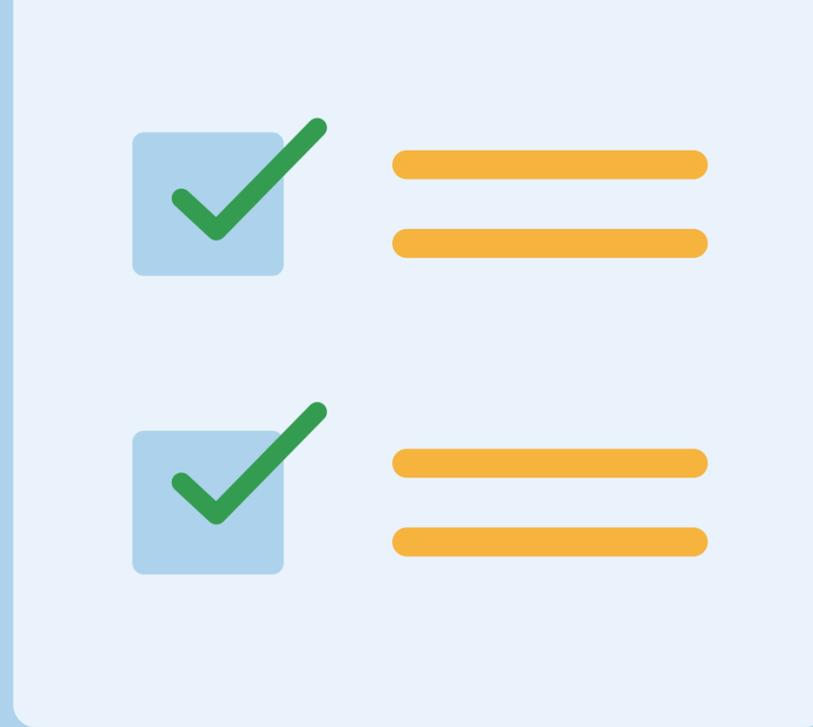
## Expansion of initiative to other family practices, schools, etc.

The handout could be made available to providers in other locations such as other family practices, schools, and pharmacies.

# References

1. Centers for Disease Control and Prevention. "Genital HPV Infection - Fact Sheet". Retrieved from <https://www.cdc.gov/std/hpv/stdfact-hpv.html>. 9/10/2020.
2. Centers for Disease Control and Prevention. "Reasons to Get Vaccinated". Retrieved from <https://www.cdc.gov/hpv/parents/vaccine/six-reasons.html>. 9/10/2020.
3. Centers for Disease Control and Prevention. "HPV Diseases and Cancers". Retrieved from <https://www.cdc.gov/hpv/parents/cancer.html>. 9/10/2020.
4. Centers for Disease Control and Prevention. "Cancers Caused by HPV are Preventable". Retrieved from <https://www.cdc.gov/hpv/hcp/protecting-patients.html>. 9/10/2020.
5. Centers for Disease Control and Prevention. "Datasets and Related Documentation for the National Immunization Survey - Teen, 2008-2014". Retrieved from [https://www.cdc.gov/nchs/nis/data\\_files\\_teen.html](https://www.cdc.gov/nchs/nis/data_files_teen.html). 9/10/2020.
6. Connecticut State Department of Public Health. "Healthy Connecticut 2020". Retrieved from <https://portal.ct.gov/dph/State-Health-Planning/Healthy-Connecticut/Healthy-Connecticut-2020>. 9/10/2020.
7. Connecticut State Department of Public Health. "Immunization Laws and Regulations". Retrieved from <https://portal.ct.gov/DPH/Immunizations/Immunization--Laws-and-Regulations>. 9/10/2020.
8. Connecticut State Department of Public Health. "School Immunization Survey Data". Retrieved from <https://portal.ct.gov/DPH/Immunizations/School-Survey>. 9/10/2020.
9. Healthy People 2020. "Immunization and Infectious Diseases". Office of Disease Prevention and Health Promotion. Retrieved from <https://www.healthypeople.gov/2020/topicsobjectives/topic/immunization-and-infectious-diseases/objectives>. 9/10/2020.
10. Meites E., Szilagyi PG., Chesson HW., Unger ER., Romero JR., Markowitz LE. Human Papillomavirus Vaccination for Adults: Updated Recommendations of the Advisory Committee on Immunization Practices. *Morbidity and Mortality Weekly Report*. August 16, 2019. 68(32); 698-702.
11. Holman DM., Benard V., Roland KB., Watson M., Liddon N., Stokley S. Barriers to Human Papillomavirus Vaccination Among US Adolescents: A Systematic Review of the Literature. *JAMA Pediatr*. 2014 Jan;168(1):76-82.





# 10 Interview consent form

Thank you for agreeing to be interviewed. This project is a requirement for the Family Medicine clerkship. It will be stored on the Dana Library ScholarWorks website. Your name will be attached to your interview and you may be cited directly or indirectly in subsequent unpublished or published work. The interviewer affirms that he/she has explained the nature and purpose of this project. The interviewee affirms that he/she has consented to this interview.

## Consented:

Laurie Schedgick-Davis, MD  
Darlene Benson, RN