

ABSTRACT

Human papillomavirus (HPV) is the most common sexually transmitted infection in the United States, causing several cancers including cervical, vaginal, and vulvar cancer in females, penile cancer in men, and oropharyngeal cancer in all genders. Studies demonstrate conflicting evidence regarding the impact of race and ethnicity on HPV vaccination rates. Regarding socioeconomic status (SES), studies demonstrate that children living below the poverty line experience vaccination rates that lag behind children living at or above the poverty line for vaccines requiring multiple doses and newer vaccines. This directly pertains to the HPV vaccine, which is a multiple-dose vaccination that became available in 2006. This study aimed to analyze factors influencing one's decision to obtain the HPV vaccine and complete the HPV vaccination series. A 12 question Qualtrics survey available in both English and Spanish was distributed via social media and throughout various healthcare clinics in the DFW area. We hope to use this data to implement interventions and distribute subsequent flyers to determine if specific interventions improve HPV vaccination and completion rates across vulnerable populations in North Texas. Finally, we aim to utilize our results to implement broad scale changes and improve HPV vaccination rates to subsequently decrease HPV-related cancers across the United States.

BACKGROUND

- The HPV vaccine was made available to the public in 2006 to protect against cervical cancer, vaginal cancer, vulvar cancer, and more. However, over a decade later, the percentage of the intended population of individuals between the ages of 13 and 17 vaccinated against HPV remains subpar.
- While data has indicated an increase in vaccinations from roughly 49% in 2019 to 58% in 2020, it was determined that 40% of teens are not up to date on the full vaccination series. Additionally, studies have shown even lower vaccination rates in rural teens, about 50%.
- The percentage of individuals aged 13-17 in Texas as a state that are up-to-date on the HPV vaccine was only 54% in 2020, compared to national averages of 58.6%. While this is a difference of 4.6%, the goal should be to at least meet, if not surpass the national averages.

OBJECTIVES

- Create a survey to both determine the general public's understanding of HPV and understand the HPV vaccination patterns across North Texas
- Determine differences in vaccination rates across SES, race, and urban vs rural living
- Utilize results to educate populations and improve HPV vaccination rates to decrease HPV-related malignancies

METHODS

- IRB approval and creation of surveys
- Distribution of surveys amongst medical facilities and through social media via flyers
- Survey questions included: County in which the participant resided, household income, race and ethnicity, age range, participant knowledge of the HPV vaccine, HPV vaccination status, and reasons against obtaining the vaccine for those who were unvaccinated

In this multi-centered observational study, patients and parents/guardians of patients between the ages of 9-26 were surveyed. We used this database to look at three factors: race, socioeconomic status (SES) stratified into low, medium, and high SES, and urban versus rural residencies. Race categories were determined based off the U.S. Census and included White, Black or African American, Asian American, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, and Other (fill in the blank). Low SES was defined as a household income less than \$50,000, medium SES was defined as \$50,000-\$70,000, and high SES was defined as greater than \$70,000. Survey questions included patient age, county of residence, race, household income, if the patient had heard of the HPV vaccine before, what they believed the HPV vaccine is intended for, what they believe is the earliest age an individual can receive the HPV vaccine, which genders the HPV is intended for, if the patient has received the HPV vaccine, if they have completed the HPV vaccine series and if not, how many doses they received, and lastly, their reasoning behind not obtaining the HPV vaccine if they were not vaccinated against HPV. Survey answers were collected through a Qualtrics form and available in both Spanish and English. Surveys were distributed through social media as well as through local clinics and word of mouth.

RESULTS

- 30 survey responses were collected
- 5 surveys were started, but not completed
- Only one response was received from the Spanish survey, and it was incomplete

RESULTS

Table 1: Characteristics and HPV vaccine status of individuals aged 9-26 years (n = 30)

	Initiated HPV vaccine	Completed HPV vaccine series	Not received any doses of the HPV vaccine	Unsure of HPV vaccine status
SES				
Low	5	3	-	2
Middle	1	1	1	-
High	12	10	6	3
Race				
Hispanic	2	1	-	-
Black	-	-	-	2
Asian	3	3	3	1
White	13	10	4	2

CONCLUSIONS

- While we initially expected to collect a greater number of data points, we came to understand many of the barriers and expect to address and amend our project to recruit additional participants for a more significant data set in the coming months
- The data we were able to collect demonstrates that contrary to our initial hypothesis, individuals who identified as Caucasian and who fell under the high SES in fact had the highest number of participants not vaccinated against HPV
- Further studies are warranted to increase sample size, diversity of recruited population, and power of analysis
- Additionally, future studies are also warranted to implement interventions based on analysis behind low vaccination rates to determine the most effective means of increasing HPV vaccination rates across North Texas.
- At this current time, we are working on expanding our project throughout as many North Texas clinics as we can

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