

Improving HPV Vaccination Rates at a Large, Public University: A Quality Improvement Project

**Department of Student
Health & Wellness**

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Introduction

Human papilloma virus (HPV) is a sexually transmitted infection (STI) that is responsible for a wide range of diseases, from warts to oropharyngeal and anogenital cancers. Young people ages 15-24 account for half of all STIs, though represent just 25% of the sexually experienced population. University students of all genders have access to STI testing and treatment at the Student Health and Wellness (SHW) center through an expanded nurse-run (RN) STI clinic.

The objective of this quality improvement project was to examine HPV vaccination rates among students aged 18 and older who accessed the SHW center's Medical Services RN STI clinic from 7/27/2021- 3/3/2022. Secondary objectives included evaluating demographic data between those with documentation of full, partial or no completion of the vaccine series and measuring the number of HPV vaccinations administered based on RN recommendation.

Methodology

- Study design: Retrospective chart review
- Data source: SHW Research Database, an IRB-approved de-identified database linking:
 - Mediat, SHW's electronic medical record (EMR);
 - Student information System (SIS), the university student record management system
- Population: All students of all genders aged 18+ who presented to SHW Medical Services RN STI clinic from 7/27/2021-3/3/2022.
- During the RN STI clinic visit, a student is asked to complete a sexual health patient questionnaire about risk factors, including STI exposure, number of partners, type of sexual contact and HPV vaccination status (categorized as full, partial or none based on CDC guidelines)
- HPV vaccination status was identified in documentation from RN STI clinic visits/patient questionnaire, clinic notes, immunization record and pre-entrance health form.
- Outcome Measures: Vaccination status was designated as full or partial completion or none. Demographic characteristics of students by vaccination status were compared and number of administered HPV vaccination based on RN recommendation were quantified.

Results

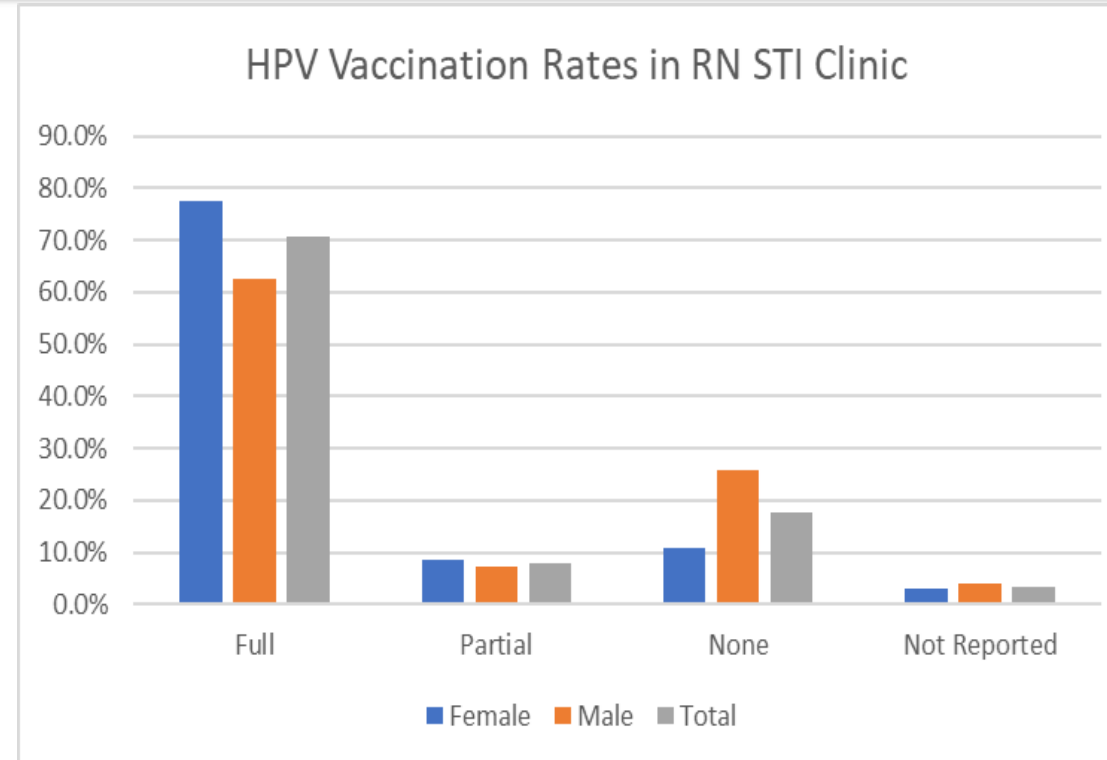


Table 1. Demographics of students who utilized RN STI clinic compared to the overall university population

Demographics	RN STI population N (%)	Overall University population N (%)
Average Age	21.9	
Sex		
Female	376 (54.3%)	14,357 (55.6%)
Male/Other	316 (45.7%)	11,669 (44.9%)
Academic Level		
Undergraduate	497 (71.8%)	17,299 (66.5%)
Graduate/Other	195 (28.2%)	8,727 (33.5%)
Race/Ethnicity		
Asian	52 (7.5%)	3,568 (13.7%)
Black or African American	74 (10.7%)	1,723 (6.6%)
Hispanic	55 (7.9%)	1,656 (6.4%)
Multi-Race	29 (4.2%)	1,232 (4.7%)
International	34 (4.9%)	2,288 (8.8%)
White	397 (57.4%)	14,411 (55.4%)
Other/Unknown	51 (7.4%)	1,148 (4.4%)

Results and Discussion

- Previous studies at SHW identified that 50.8% of students had record of full HPV vaccination, 12.7% partial and 29.3% none.
 - Of those students who had a record of full HPV vaccination, only 3.44% completed the series at SHW.
- 692 individuals aged 18-39 utilized the RN STI clinic from 7/21/21 to 3/3/22.
- Students seeking care at the RN STI clinic had higher vaccination rates from baseline vaccination rates previously studied.
 - 70.81% reported full HPV vaccination, 7.9% partial and 17.8% none.
 - 19 unique students received HPV vaccination at SHW as a direct result of STI RN clinic screening. 1 student received two doses.
- The SHW RN STI clinic now serves students of all genders, which has enabled broader HPV vaccine awareness to students who may not have previously been asked about their vaccination status.
- Demographics of the students utilizing the RN STI clinic was fairly representative of the larger Fall 2021 university population.
 - A greater percentage of undergraduate students utilized the RN STI clinic.
 - Percentage of Asian & International students that utilized the RN STI clinic was less than the percentage of the overall university population.
- Limitations of the study include:
 - Virginia law does not require students enrolling in higher education to submit verification of HPV vaccination.
 - Recall bias of self-reported history of HPV vaccination.

Conclusion and Future Directions

- Of the students without full HPV vaccination at the RN STI clinic, 15.4% initiated HPV vaccination at SHW during their appointment or at a follow up RN appointment linked to their STI screening visit.
- Nurses routinely provided information about importance of HPV vaccination to partially or unvaccinated students at RN STI clinic visits.
- RN-led clinics serve an important role at SHW, and other opportunities should be considered.
- Insurance can be a barrier to vaccination at time of recommendation, which may have limited vaccination rates in RN STI clinic.
 - SHW's pharmacy is now able to submit the cost of HPV vaccinations to insurance.
- Consistent approach for documenting HPV vaccination status in the SHW EMR, beyond the STI RN clinic, may help improve rates of full HPV vaccination.
- At a university SHW, it is important to encourage young adults to play a more central role in their healthcare decision-making, as the RN STI clinic helps to do.