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Exploring Gender Discrepancies in HPV Vaccination Rates Among Emergency Youth Shelter Residents

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Background

- Human papillomavirus (HPV) is the most common sexually transmitted infection in the United States[1]
- Most infected individuals are asymptomatic[1]
- HPV infection increases the chance of cervical, vaginal, and vulvar cancer in women and penile, anal, and oropharyngeal cancers in men[1]
- The most effective public health strategy for prevention of HPV infection is vaccination[2]
- The Advisory Committee on Immunization Practices (ACIP) recommends starting the two or three dose vaccination series as early as age 9 with routine vaccine administration between ages 11 and 12[3]
- The national vaccination coverage has slowly increased over the years[4]
  - National Immunization Survey-Teen (NIS-Teen) data in 2018: 51.1% of adolescents ages 13 to 17 completed the HPV vaccination series
- HPV vaccination status is lower compared to other recommended vaccines for adolescents[4]
- There remains a significant discrepancy between HPV vaccination status in males and females[4]
  - In 2018, 53.7% of females ages 13 to 17 completed the series vs. 48.7% of males ages 13 to 17

Problem Statement

This project sought to identify the HPV vaccination rate among emergency youth shelter residents and to explore gender differences in the adolescents' immunization status.

Methods

- A retrospective chart review was conducted for housing-insecure adolescents at the Valley Youth House (VYH) emergency shelter
- Clients who were evaluated at VYH for a state-mandated physical exam between 2015 and 2019 were included in the study
- Paper and electronic clinical records of clients were de-identified and reviewed to record client demographic information and the number of HPV vaccine doses received
- For this study, any individual who received two or more doses was considered to have completed the series
- An encrypted Microsoft Excel sheet was used to record data
- The HPV immunization status of VYH clients was then compared to the NIS-Teen data for determination of vaccination deficiencies

Figure 1. Study Inclusion and Exclusion Criteria

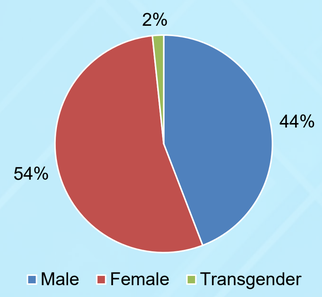
Inclusion Criteria	Exclusion Criteria
• Adolescents residing at VYH from February 1, 2015 to February 15, 2019 • Adolescents who received state-mandated physical exams • Client charts that contained HPV vaccination records	• Adolescents who were not residents at VYH • Adolescents residing at VYH who did not receive a state-mandated physical exam • Adolescents residing at VYH who were evaluated for acute-care visits

This figure lists the inclusion and exclusion criteria utilized to determine client eligibility for the study.

Results

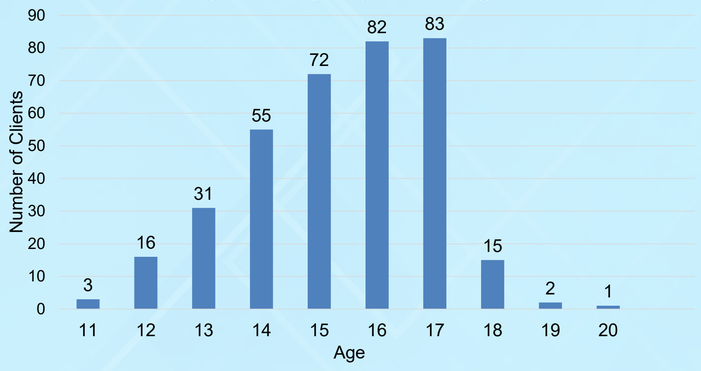
- A total of 360 client charts were obtained. Of those, 242 charts had HPV immunization records and were included in the study
- 195 (54.16%) clients identified as females, 159 (44.16%) as males, and 6 (1.67%) as transgender

Figure 2. Gender Distribution of Clients



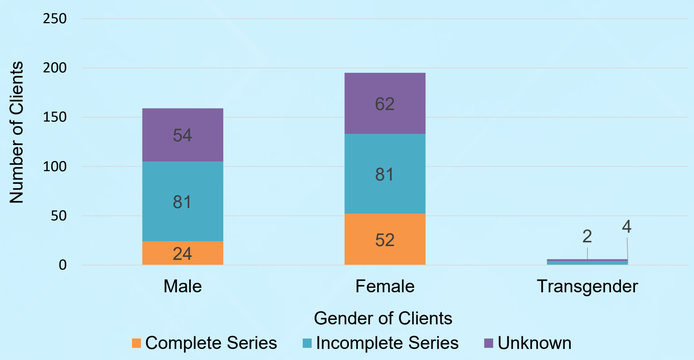
- Most of the clients were between the ages of 13 and 17 (89.72%), with 17-year-olds (23.06%) representing the majority of clients

Figure 3. Frequency of Client Ages



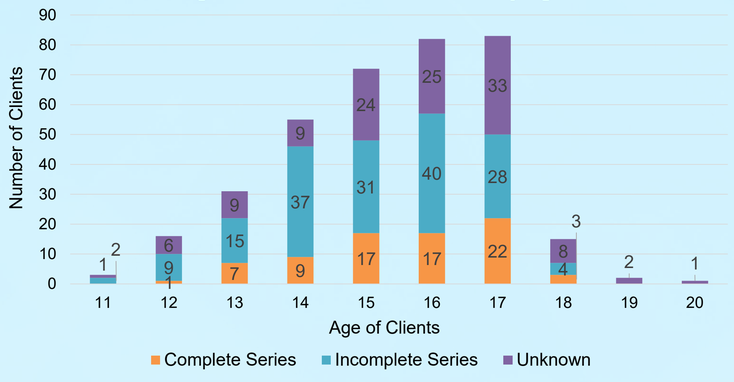
- 76 clients (31.40%) completed the HPV vaccine series
- 39.10% of the female clients had completed the series vs. 22.86% of the male clients
- Female clients were 2.16 times more likely to have completed the HPV vaccine series than male clients

Figure 4. HPV Vaccination Status By Gender



- Clients age 17 had the highest series completion rate (44%) and clients age 11 had the lowest (0%)

Figure 5. HPV Vaccination Status By Age



Discussion

- The overall HPV vaccination rate of VYH clients was below the national reported rate of 51.1%
- Data suggests that underserved populations (non-White minorities, uninsured individuals, and those with a lower household income) initiate HPV vaccination at an equal or higher rate compared to White adolescents living above the poverty level[4,5]
- Public health initiatives and outreach programs can increase HPV vaccination rates in high-risk populations[6]
  - Telephone and letter reminders, provider-targeted interventions, school-based immunization clinics
- Female VYH clients had higher vaccination rates than male clients, which is consistent with national trends
- National rates of female vaccination are higher than male vaccination due to the history of HPV vaccine research[1,7]
  - The high global burden of HPV-associated cervical cancer propagated perceptions of HPV being a female-specific disease
  - The vaccine was approved for adolescent females in 2006
  - In 2011, routine recommendation for males began after studies demonstrated relationship between HPV and anogenital cancers
- Various barriers prevent adolescents from HPV vaccination, and caregiver refusal is most common[8]
  - Lack of knowledge, misguided beliefs regarding vaccine consequences, and the vaccine's status as an optional immunization also limit vaccine rates
- One of the strongest predictors of HPV vaccine acceptance is provider recommendation[9] → physicians must recognize their role in parental decisions and proactively initiate conversations regarding HPV vaccination

Conclusions

- HPV vaccination rates remain lower in the US compared to other vaccines offered to adolescents
- The HPV vaccination status of VYH clients was below the overall national rate of 51.1%
- Female clients had higher vaccination rates than male clients, which is consistent with the national trends
- Gender-neutral vaccine recommendations have allowed males to achieve higher vaccine rates each year, but much work remains to adequately protect all adolescents against HPV-associated cancers
- It can be hypothesized that VYH clients have lower completion rates due to the potential lack of regular access to healthcare or outreach programs
- Additional studies are required to determine if the availability or accessibility of community and public health resources affects the HPV immunization status in these adolescents

REFERENCES

1. Branković I, Verdonk P, Klinge I. Applying a gender lens on human papillomavirus infection: cervical cancer screening, HPV DNA testing, and HPV vaccination. *International Journal for Equity in Health*. 2013;12(1):14. doi:10.1186/1475-9276-12-14.
2. Petrosky E, Bocchini JA, Jr., Hariri S, Chesson H, Curtis CR, Saraiya M, et al. Use of 9-valent human papillomavirus (HPV) vaccine: updated HPV vaccination recommendations of the advisory committee on immunization practices. *MMWR Morb Mortal Wkly Rep*. 2015;64(11):300-4. 304.
3. Markowitz LE, Dunne EF, Saraiya M, et al. Human papillomavirus vaccination: recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR Recomm Rep*. 2014;63(RR-05):1–30.
4. Walker TY, Elam-Evans LD, Yankey D, et al. National, Regional, State, and Selected Local Area Vaccination Coverage Among Adolescents Aged 13–17 Years — United States, 2018. *MMWR Morb Mortal Wkly Rep*. 2019;68:718–723. doi: http://dx.doi.org/10.15585/mmwr.mm6833a2.
5. Jeudin P, Liveright E, del Carmen MG, Perkins RB. Race, Ethnicity, and Income Factors Impacting Human Papillomavirus Vaccination rates. *Clinical Therapeutics*. 2014;36(1):24-37. https://doi.org/10.1016/j.clinthera.2013.11.001.
6. Walling EB, Benzoni N, Dornfeld J, et al. Interventions to Improve HPV Vaccine Uptake: A Systematic Review. *Pediatrics*. 2016;138(1):e20153863. doi:10.1542/peds.2015-3863
7. Daley EM, Vamos CA, Thompson EL, et al. The feminization of HPV: How science, politics, economics and gender norms shaped U.S. HPV vaccine implementation. *Papillomavirus Res*. 2017;3:142–148. doi:10.1016/j.pvr.2017.04.004.
8. 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;168(1):76–82. doi:10.1001/jamapediatrics.2013.2752.
9. Loke AY, Kwan ML, Wong YT, Wong AKY. The Uptake of Human Papillomavirus Vaccination and Its Associated Factors Among Adolescents: A Systematic Review. *J Prim Care Community Health*. 2017;8(4):349–362. doi:10.1177/2150131917742299

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