



University of Kentucky
UKnowledge

DNP Projects

College of Nursing

2016

Evaluating Provider Knowledge of the HPV Vaccine in Kentucky

Madeline A. Wilson

University of Kentucky, mwwils6@gmail.com

[Right click to open a feedback form in a new tab to let us know how this document benefits you.](#)

Recommended Citation

Wilson, Madeline A., "Evaluating Provider Knowledge of the HPV Vaccine in Kentucky" (2016). *DNP Projects*. 94.

https://uknowledge.uky.edu/dnp_etds/94

This Practice Inquiry Project is brought to you for free and open access by the College of Nursing at UKnowledge. It has been accepted for inclusion in DNP Projects by an authorized administrator of UKnowledge. For more information, please contact UKnowledge@lsv.uky.edu.

Final DNP Project Report
Evaluating Provider Knowledge of the HPV Vaccine in Kentucky

Madeline Wilson, RN, BSN

University of Kentucky

College of Nursing

July 1, 2016

Leslie K. Scott PhD, PPCNP-BC, CDE, MLDE – Committee Chair

Dianna Inman, DNP, RN – Committee Member

Amy Burnett, MSN, RN – Clinical Mentor

Abstract

According to the CDC, about 79 million Americans are currently infected with Human papillomavirus (HPV) with an additional 14 million infected annually, most of which are teenagers and young adults. Of these 14 million newly diagnosed cases, approximately 27,000 are diagnosed with a cancer caused by HPV. Kentucky's HPV vaccination initiation and completion rates are below national estimates.

In 2013, Kentucky's vaccine completion rate for girls age 13 to 17 was 26.8 percent compared to United States completion rate of 37.6 percent. Kentucky vaccine completion rate for boys age 13 to 17 was 19 percent compared to a United States completion rate of 35 percent.

It is estimated that for every 5 year delay of vaccinating against HPV will yield in 1.5 to 2 million new cases of cervical cancer each year. There are three vaccines licensed by the FDA; Cervarix, Gardasil and Gardasil 9. These are all to be given in a 3-dose series with doses given at 0, 1-2 and 6 months. It is imperative that primary care providers advocate for the recommended administration of the HPV vaccine and disseminate factual and up-to-date information to parents and caregivers.

Background and Significance

HPV is a virus that is passed from direct skin contact, most commonly genital contact. HPV is incredibly prevalent in the community and many infected people show no identifiable symptoms, therefore the majority of people infected have no idea they have HPV. HPV can go away on its own, but can also cause serious health problems such as cervical, vaginal, vulvar, and anal cancer (U.S. Food and Drug Administration, 2014).

There are several sexual lifestyle choices that individuals can make to lower their risk of getting HPV. The earlier someone becomes sexually active and the more sexual partners the individual and their partner have, the higher their chances are of contracting HPV. The use of condoms does not impact an individual's chances of getting HPV (U.S. Food and Drug Administration, 2014).

Fortunately, there is a safe and effective option for protection against HPV. The FDA and Advisory Committee on Immunization Practices (ACIP) have approved two vaccines for protection against HPV; Gardasil produced by Merck and Cervarix produced by GlaxoSmithKline (National Conference of State Legislatures, 2014). Gardasil is a quadrivalent human papillomavirus vaccine that is recommended for both girls and boys. Cervarix is a bivalent human papillomavirus vaccine that is recommended for just girls. Both vaccines are recommended to be given at 11 to 12 years of age and in a 3-dose series. The second dose of the 3-dose series should be administered 1 to 2 months after the first dose, and the third dose should be administered 6 months after the first dose (Center for Disease Control and Prevention, 2014).

There are four strains of HPV that are responsible for 91 percent of cervical cancer cases (Centers for Disease Control and Prevention, 2014). These four strains are 6, 11, 16, and 18.

Gardasil targets all four strains while Cervarix protects against strains 16 and 18 (National Conference of State Legislatures, 2014).

Researchers believe that race and ethnicity play a significant epidemiological role in HPV related cervical cancer. Two times as many African American women than white women die from cervical cancer a year, statistically 5 vs 2.4 respectively per 100,000 (Moscicki, 2005). Hispanic women are also at increased risk for fatality in comparison to white women. There are 3.4 Hispanic deaths per 1000,000 women annually (Moscicki, 2005). Cervical cancer is tightly linked with poor socioeconomic status and higher mortality rates in urban communities. Other substantially contributory risk factors include smoking, alcohol use, uncircumcised male partner, long term contraceptive use, multiple pregnancies, and HIV infection (Moscicki, 2005). Providers believe these statistical trends are a result of lack of access to routine Pape testing and/or poor compliance to initial or follow-up treatments (Centers for Disease Control and Prevention, 2014).

It is evident that HPV is a silent threat to all women regardless their lifestyle choices and personal health compliance. Women of all walks of life are vulnerable and silent symptoms can quickly progress to a fatal virus that is currently taking thousands of women's lives each year. However, there is a vaccine that if given per recommendation, can eliminate virtually 91 percent of cases (Centers for Disease Control and Prevention, 2014).

Objectives

The purpose of this study is to evaluate Kentucky Providers' understanding and feelings towards the HPV Vaccine and the implementation in primary care practice. The goal is to identify demographic gaps and identify where intervention can yield the most impact.

EVALUATING PROVIDER KNOWLEDGE OF THE HPV VACCINE IN KENTUCKY

A questionnaire titled “Evaluating Provider Knowledge of the HPV Vaccine in Kentucky” was sent to all members of the Kentucky Coalition of Nurse Practitioners & Nurse Midwives listserv. The purpose of this study is to evaluate Kentucky Providers’ understanding and feelings towards the HPV Vaccine and implementation in primary care practice. The goal is to isolate demographic gaps and identify where intervention can yield the most impact.

Procedure

Permission for this study was granted from the University of Kentucky Institutional Review Board, Exemption Certification for Protocol No. 16-0285-X1B. Permission was obtained via email from Lynne Cobb with Kentucky Coalition of Nurse Practitioners & Nurse Midwives (KCNPNM). KCNPNM listserv was used to disseminate the survey.

Inclusion criteria for the study population included Nurse Practitioners practicing in the state of Kentucky and subscribed to the KCNPNM listserv. Exclusion criteria included those Nurse Practitioners in Kentucky that were not subscribed to the KCNPNM listserv. Age, race, discipline of practice, or any other demographics were utilized as exclusion criteria.

Methods

The instrument used to carry out this study was a questionnaire generated by REDCap. The questionnaire included 23 questions and took approximately 3 to 5 minutes to complete. Participants consented to taking the questionnaire and reserved the right to not answer any question they did not wish. The responses to the survey were anonymous which means no names appeared or were used on research documents, or used in presentations or publications. The survey was sent over KCNPNM listserv twice in a two-week period from April 11th to April 24th.

Results

The survey had a total of 22 responders. Clinical significant findings included 8 of the 22 responders reported working in a rural setting and all recommended the HPV vaccination to their patients' parents or caregivers. Additionally, 6 of the 22 responders that reported they work exclusively with the pediatric populations also recommend the vaccine. Therefore, a 100% compliance rate was concluded from a rural and pediatric primary setting.

Limitations

The largest limitation was the number of responses and homogeneity of the responders, with 22 female participants. Although by design, the participants only represent Kentucky and therefore cannot be generalized nationally. All of the responders held a Masters or Doctorate degree in addition to 95% of responders were Caucasian and fully vaccinated.

Conclusion

A substantial gap between provider knowledge and actual implementation and administration of the HPV vaccine has been identified in Kentucky. There is an enormous opportunity at a pediatric, primary care and public health level to close this gap with provider advocacy and education. Moving forward, involvement in schools and at a legislative level is imperative to successful HPV vaccine implementation and administration and should be at the forefront of this movement.



University of Kentucky
Center for Clinical and Translational Research

Evaluation of Provider Knowledge of the HPV Vaccine in Kentucky

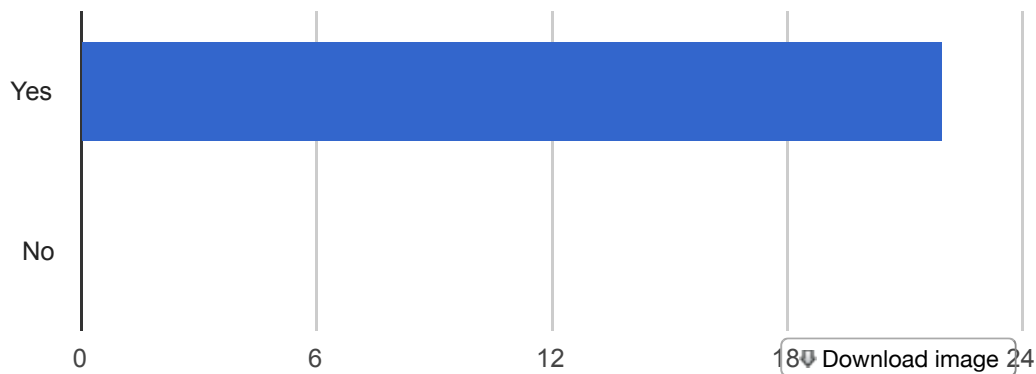
Data Exports, Reports, and Stats

All data (all records and fields)

I am consenting to take this survey.

Total Count (N)	Missing	Unique
22	0 (0.0%)	1

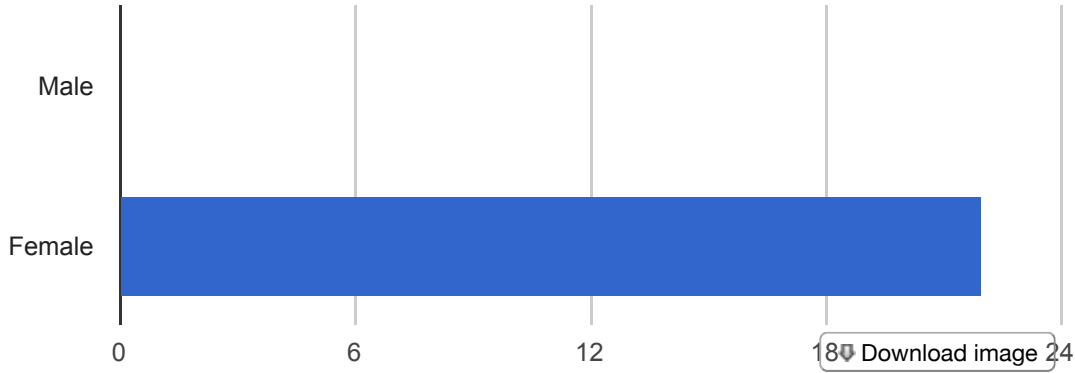
Counts/frequency: Yes (22, 100.0%), No (0, 0.0%)



What is your gender?

Total Count (N)	Missing	Unique
22	0 (0.0%)	1

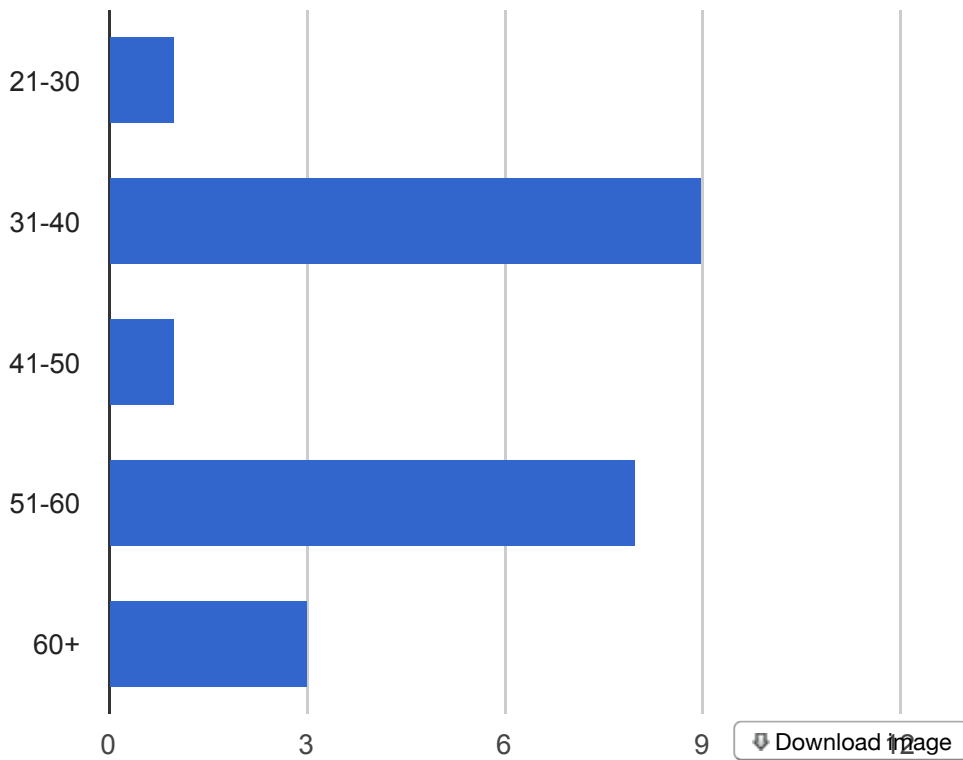
Counts/frequency: Male (0, 0.0%), Female (22, 100.0%)



What is your age?

Total Count (N)	Missing	Unique
22	0 (0.0%)	5

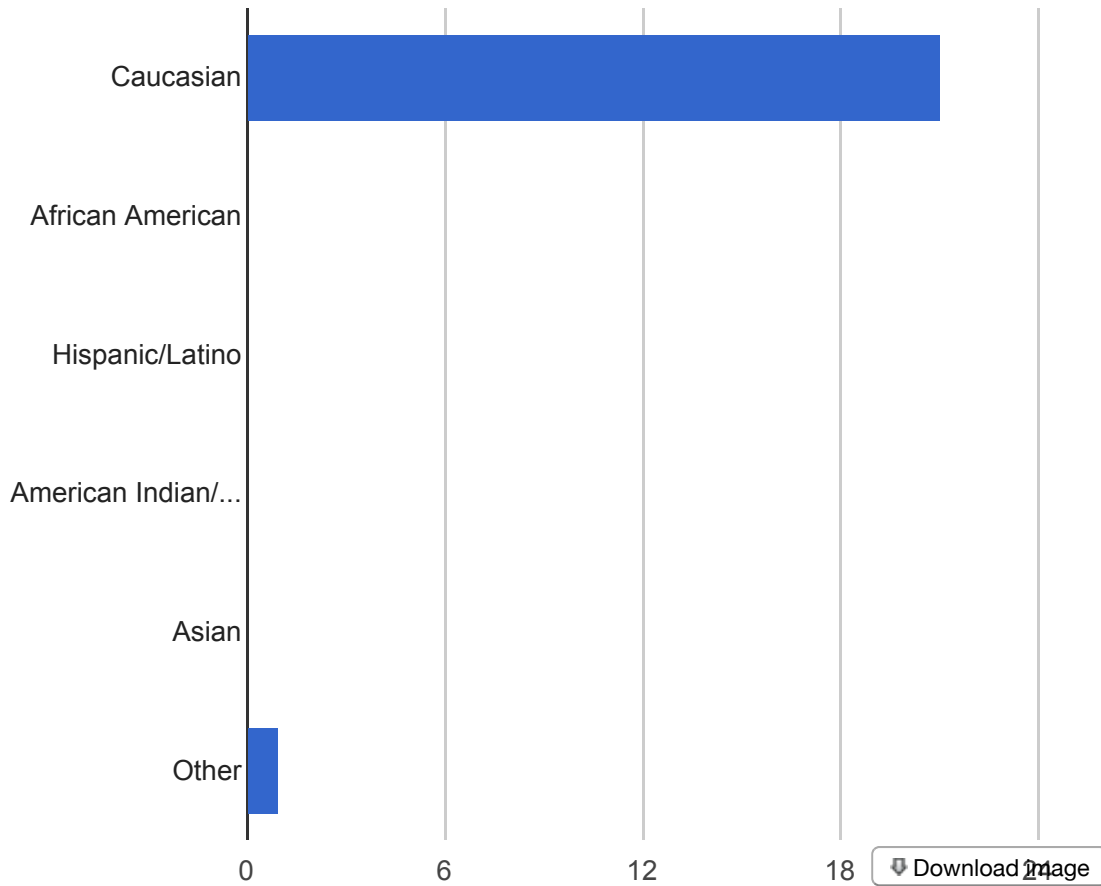
Counts/frequency: 21-30 (1, 4.5%), 31-40 (9, 40.9%), 41-50 (1, 4.5%), 51-60 (8, 36.4%), 60+ (3, 13.6%)



What is your ethnicity?

Total Count (N)	Missing	Unique
22	0 (0.0%)	2

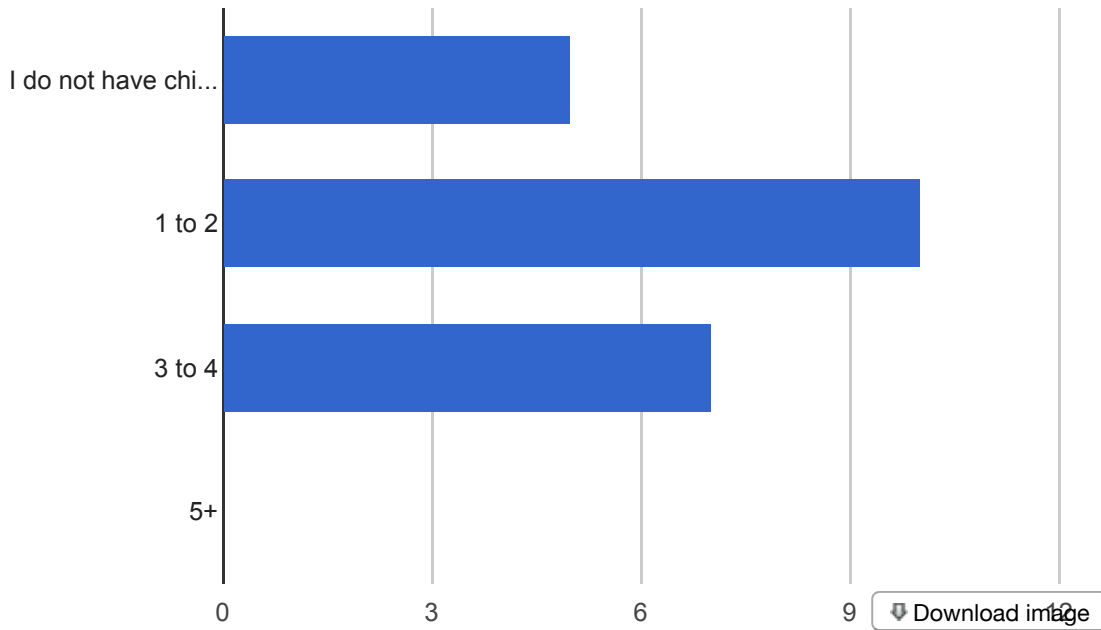
Counts/frequency: Caucasian (21, 95.5%), African American (0, 0.0%), Hispanic/Latino (0, 0.0%), American Indian/Alaska Native (0, 0.0%), Asian (0, 0.0%), Other (1, 4.5%)



How many children do you have, if any?

Total Count (N)	Missing	Unique
22	0 (0.0%)	3

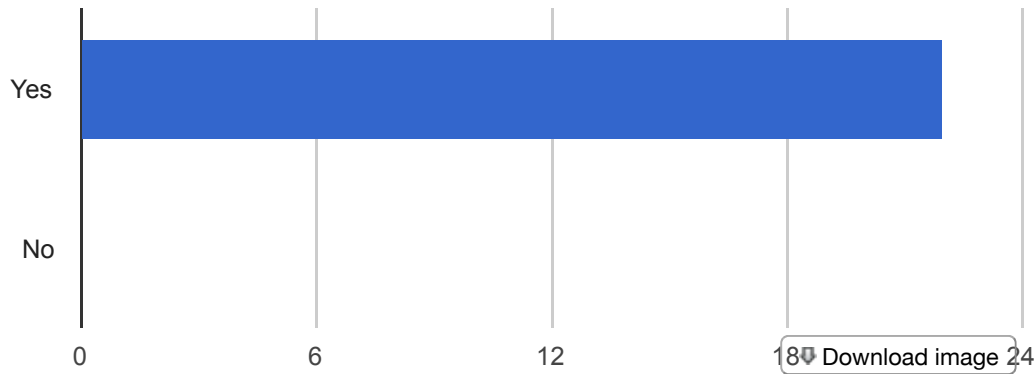
Counts/frequency: I do not have children (5, 22.7%), 1 to 2 (10, 45.5%), 3 to 4 (7, 31.8%), 5+ (0, 0.0%)



Do you have insurance?

Total Count (N)	Missing	Unique
22	0 (0.0%)	1

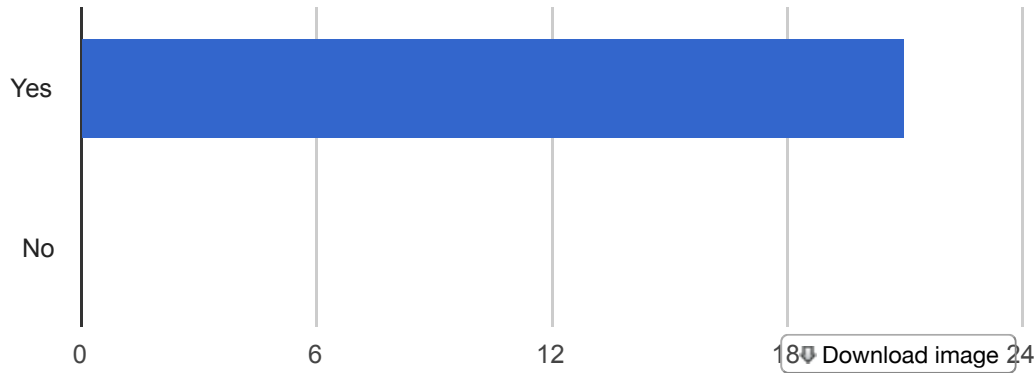
Counts/frequency: Yes (22, 100.0%), No (0, 0.0%)



Are you fully vaccinated?

Total Count (N)	Missing	Unique
21	1 (4.5%)	1

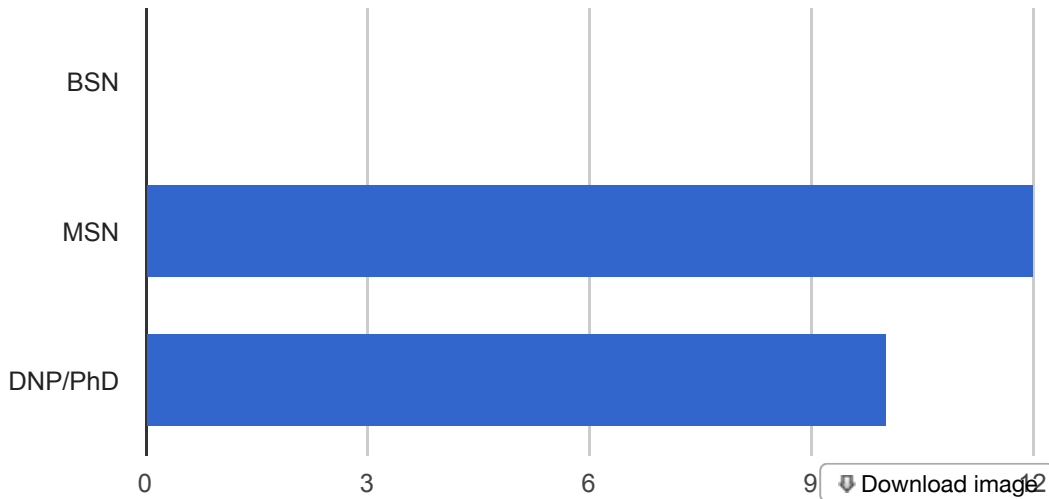
Counts/frequency: Yes (21, 100.0%), No (0, 0.0%)



What is the highest degree you have achieved?

Total Count (N)	Missing	Unique
22	0 (0.0%)	2

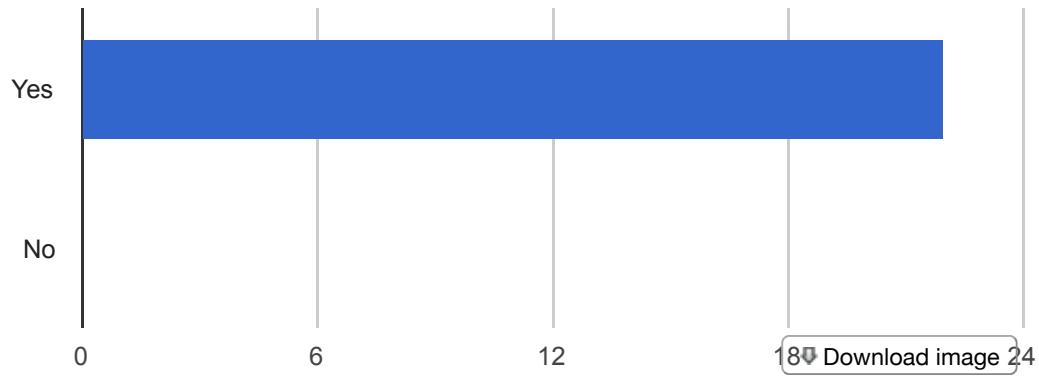
Counts/frequency: BSN (0, 0.0%), MSN (12, 54.5%), DNP/PhD (10, 45.5%)



Are you a licensed Nurse Practitioner?

Total Count (N)	Missing	Unique
22	0 (0.0%)	1

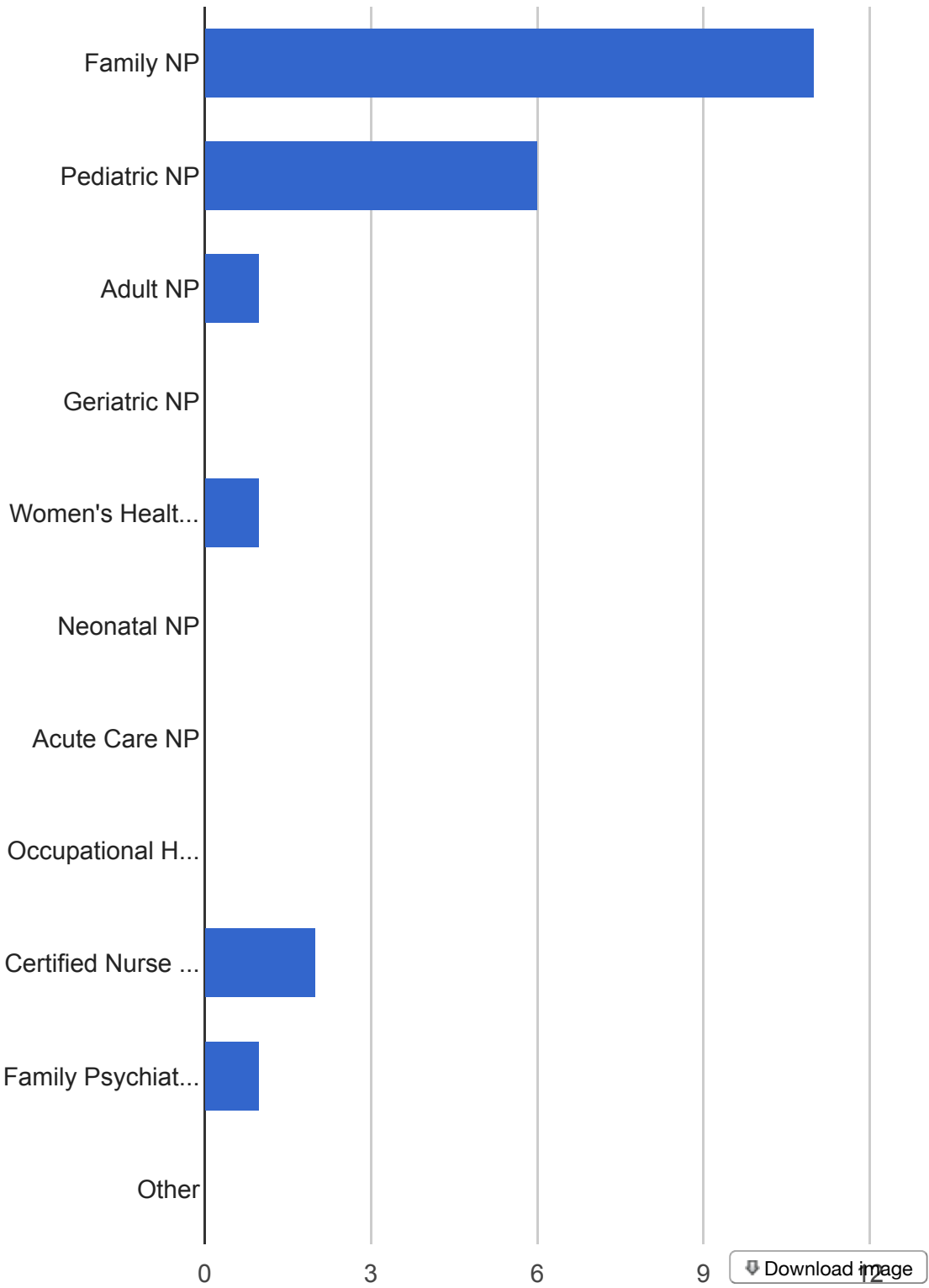
Counts/frequency: Yes (22, 100.0%), No (0, 0.0%)



What type of advanced practice provider licensure do you hold?

Total Count (N)	Missing	Unique
22	0 (0.0%)	6

Counts/frequency: Family NP (11, 50.0%), Pediatric NP (6, 27.3%), Adult NP (1, 4.5%), Geriatric NP (0, 0.0%), Women's Health NP (1, 4.5%), Neonatal NP (0, 0.0%), Acute Care NP (0, 0.0%), Occupational Health NP (0, 0.0%), Certified Nurse Midwife (2, 9.1%), Family Psychiatric NP (1, 4.5%), Other (0, 0.0%)

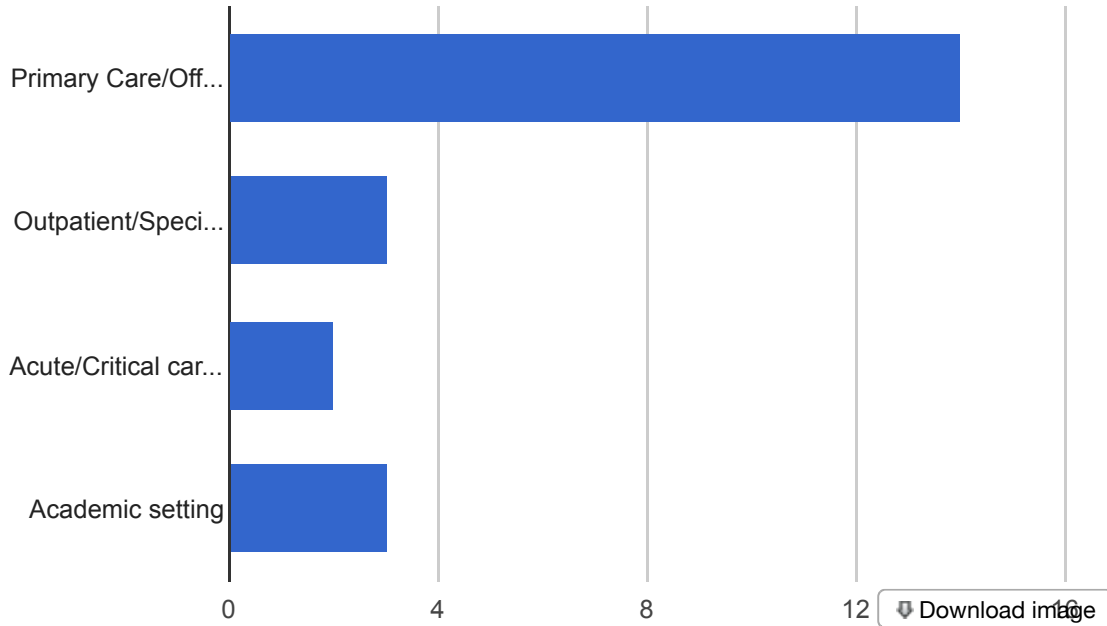


What best describes your current work environment?

Total Count (N)	Missing	Unique

22	0 (0.0%)	4
----	----------	---

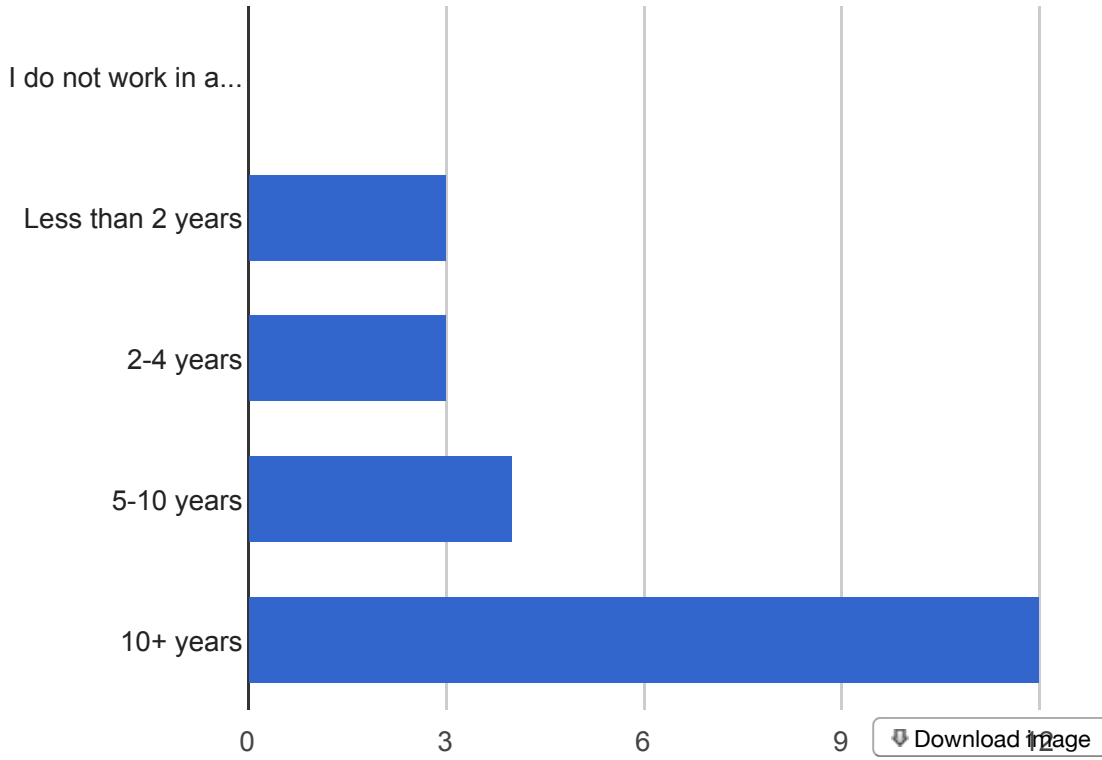
Counts/frequency: Primary Care/Office setting (14, 63.6%), Outpatient/Specialty Clinic (3, 13.6%), Acute/Critical care in a hospital (2, 9.1%), Academic setting (3, 13.6%)



How long have you been in clinical practice as a provider?

Total Count (N)	Missing	Unique
22	0 (0.0%)	4

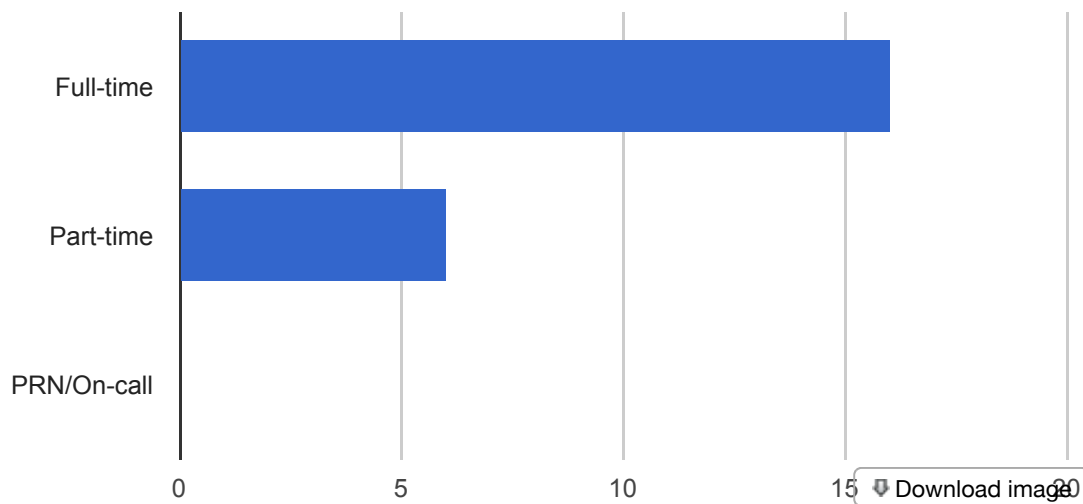
Counts/frequency: I do not work in a clinical setting (0, 0.0%), Less than 2 years (3, 13.6%), 2-4 years (3, 13.6%), 5-10 years (4, 18.2%), 10+ years (12, 54.5%)



What is your work status?

Total Count (N)	Missing	Unique
22	0 (0.0%)	2

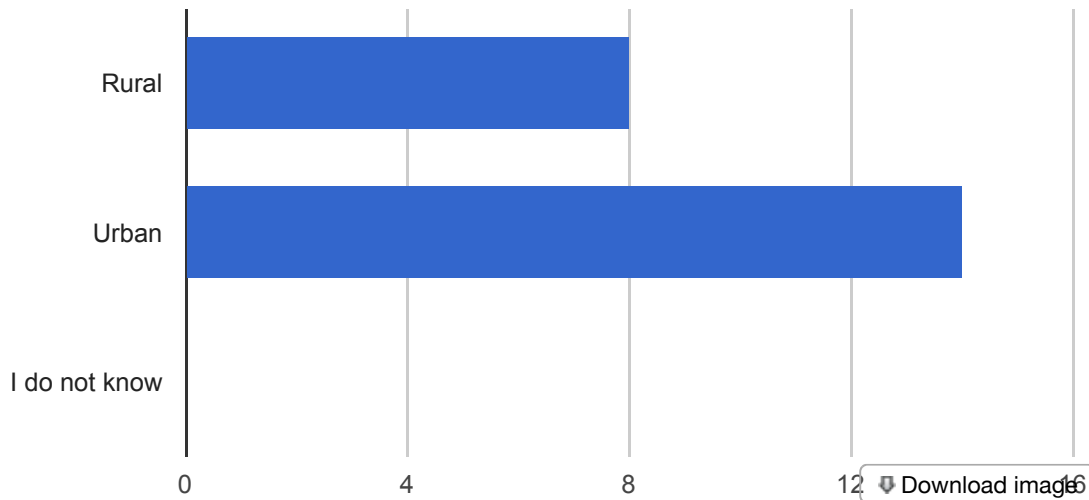
Counts/frequency: Full-time (16, 72.7%), Part-time (6, 27.3%), PRN/On-call (0, 0.0%)



Is your practice or place of employment considered more rural or more urban?

Total Count (N)	Missing	Unique
22	0 (0.0%)	2

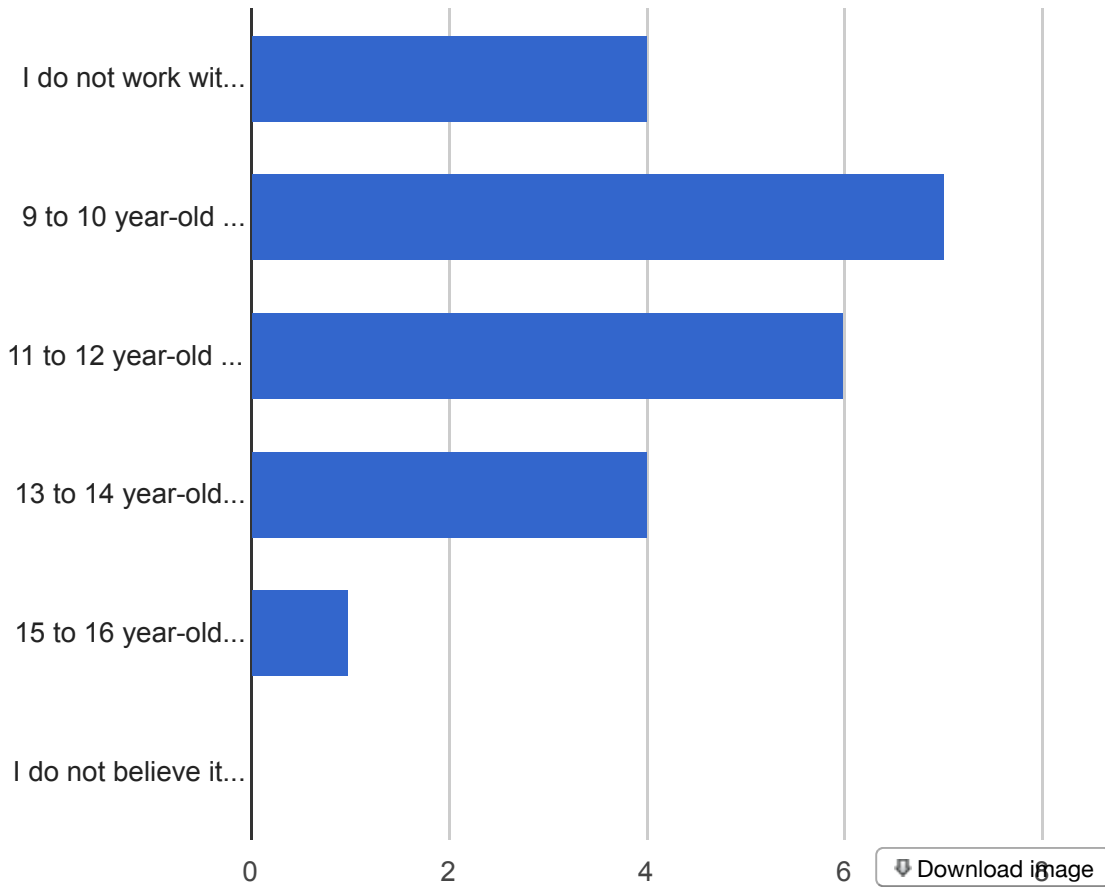
Counts/frequency: Rural (8, 36.4%), Urban (14, 63.6%), I do not know (0, 0.0%)



At what age do you feel, as a provider, it is appropriate to initially discuss safe sex with the pediatric population?

Total Count (N)	Missing	Unique
22	0 (0.0%)	5

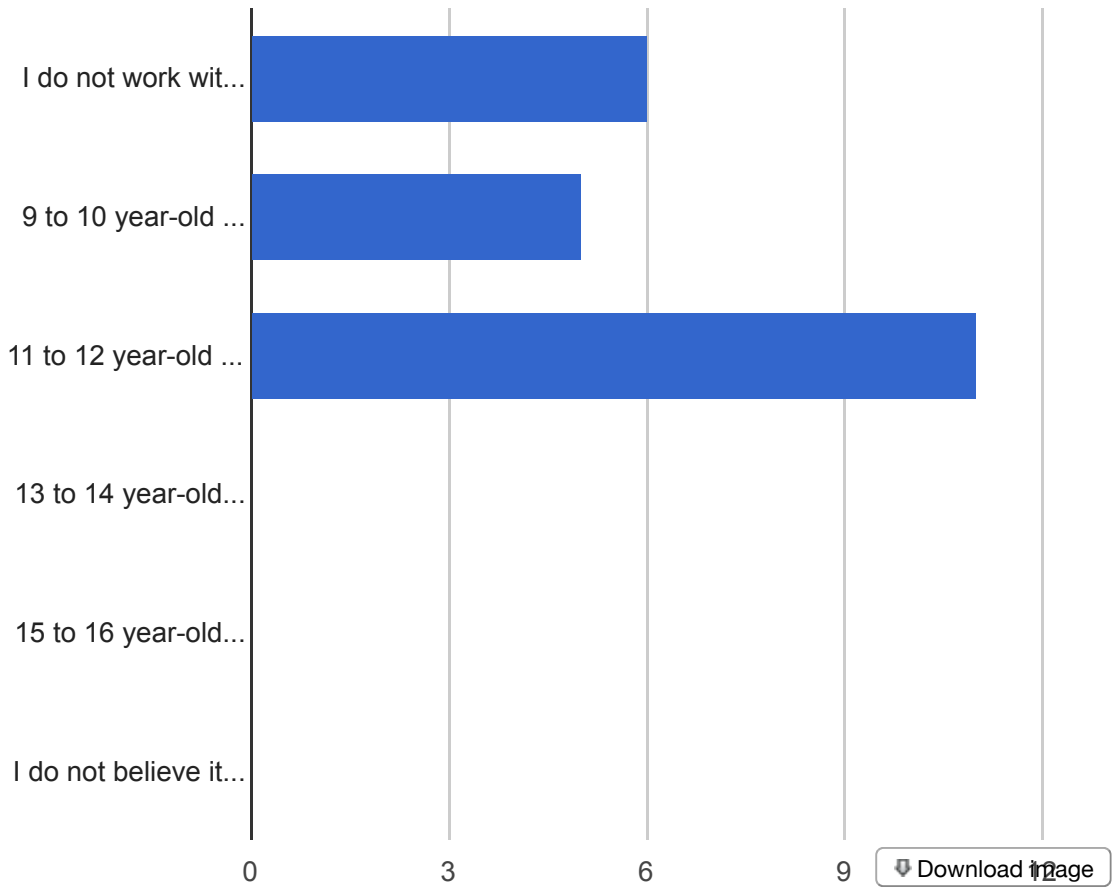
Counts/frequency: I do not work with pediatric patients and/or do not have an opinion (4, 18.2%), 9 to 10 year-old well-child check-up (7, 31.8%), 11 to 12 year-old well-child check-up (6, 27.3%), 13 to 14 year-old well-child check-up (4, 18.2%), 15 to 16 year-old well-child check-up (1, 4.5%), I do not believe it is appropriate to initiate discussion until patient is sexually active (0, 0.0%)



At what age do you actually discuss the HPV vaccine with the pediatric population?

Total Count (N)	Missing	Unique
22	0 (0.0%)	3

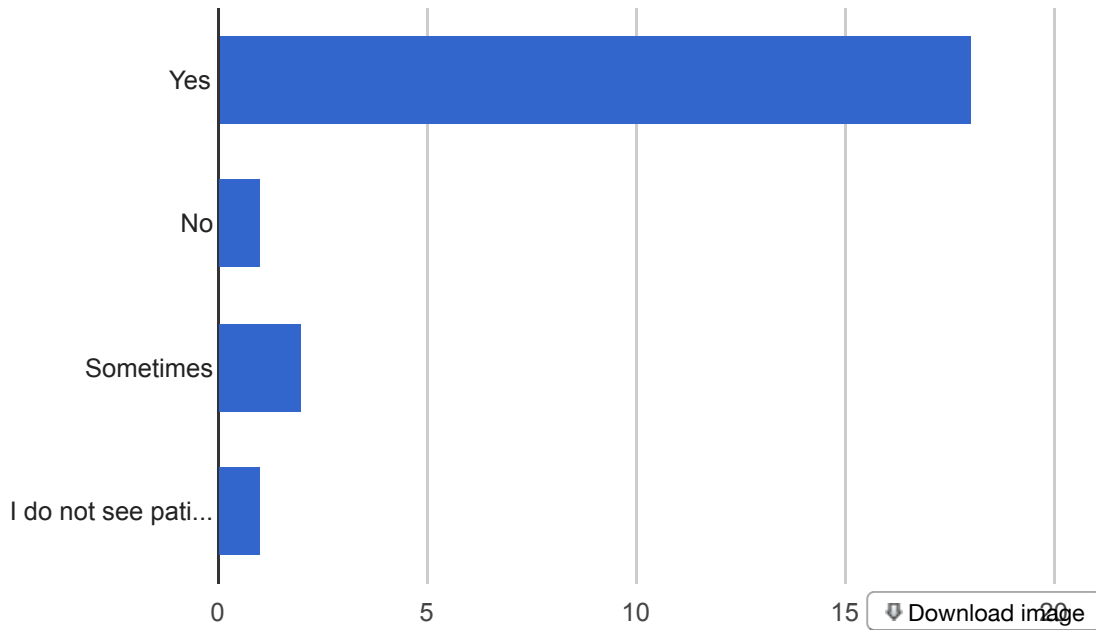
Counts/frequency: I do not work with the pediatric population (6, 27.3%), 9 to 10 year-old well-child check-up (5, 22.7%), 11 to 12 year-old well-child check-up (11, 50.0%), 13 to 14 year-old well-child check-up (0, 0.0%), 15 to 16 year-old well-child check-up (0, 0.0%), I do not believe it is appropriate to initiate discussion until patient is sexually active (0, 0.0%)



I recommend the HPV vaccine to my patients.

Total Count (N)	Missing	Unique
22	0 (0.0%)	4

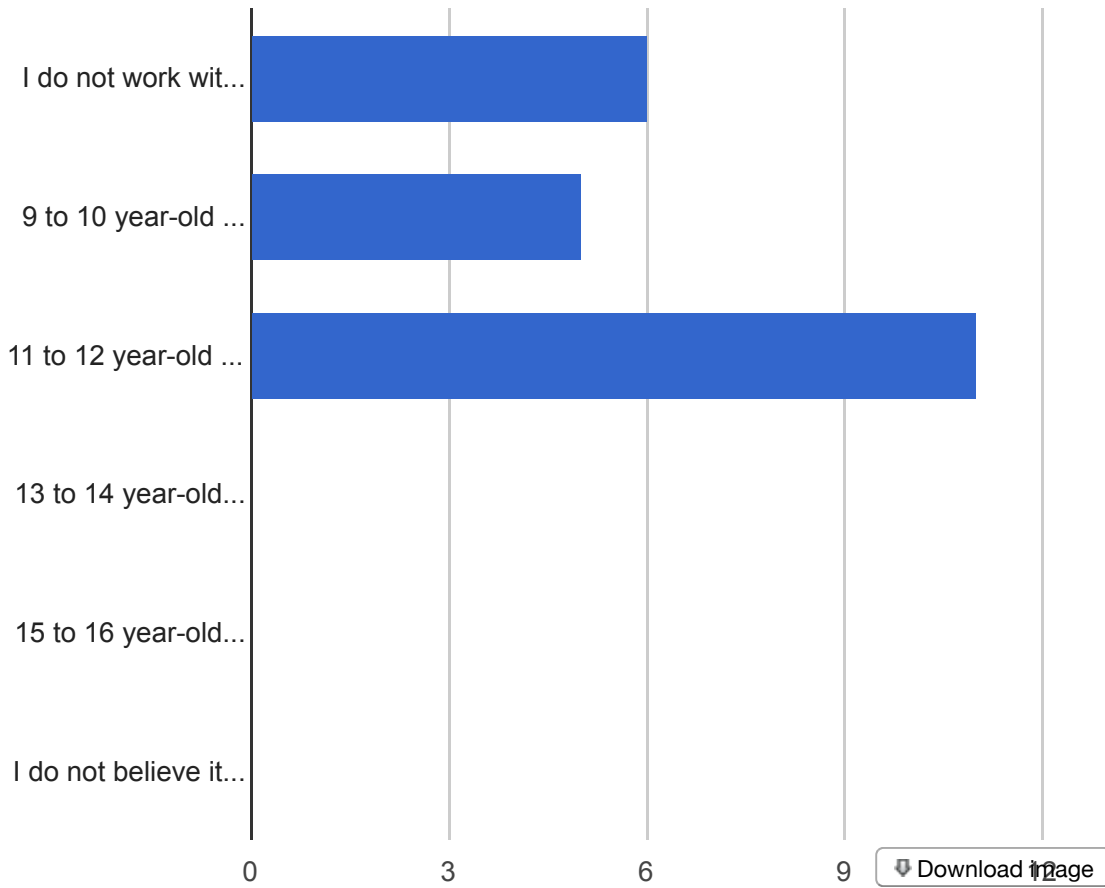
Counts/frequency: Yes (18, 81.8%), No (1, 4.5%), Sometimes (2, 9.1%), I do not see patients in a clinical setting (1, 4.5%)



At what age do you actually offer the HPV vaccine?

Total Count (N)	Missing	Unique
22	0 (0.0%)	3

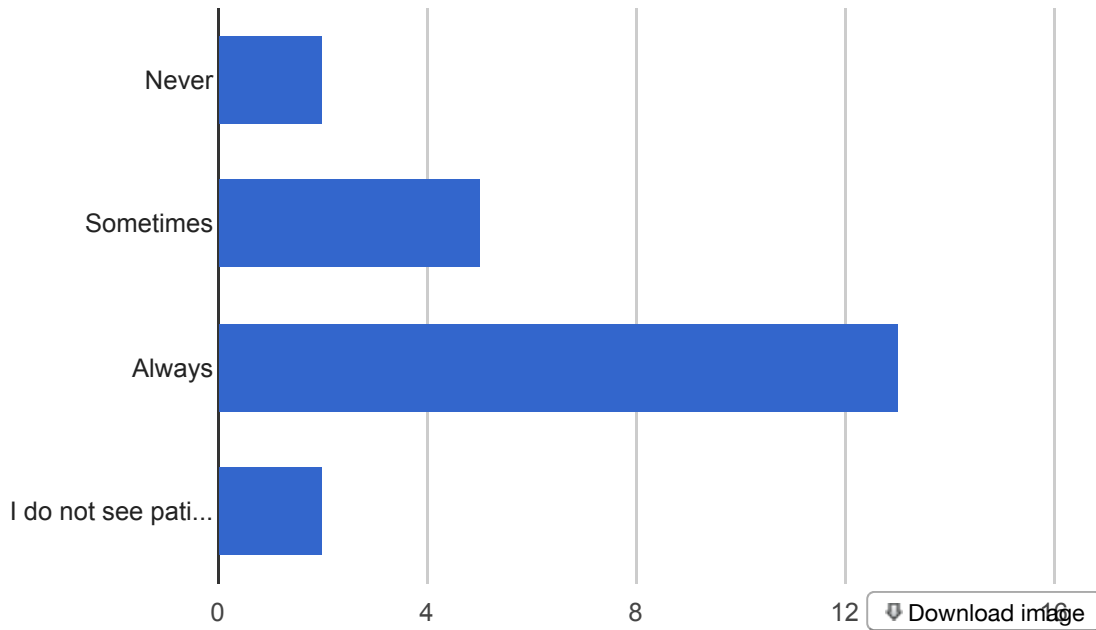
Counts/frequency: I do not work with the pediatric population (6, 27.3%), 9 to 10 year-old well-child check-up (5, 22.7%), 11 to 12 year-old well-child check-up (11, 50.0%), 13 to 14 year-old well-child check-up (0, 0.0%), 15 to 16 year-old well-child check-up (0, 0.0%), I do not believe it is appropriate to initiate discussion until patient is sexually active (0, 0.0%)



If a patient and/or guardian decline the HPV vaccine, I follow-up and offer additional and factual information at the same appointment.

Total Count (N)	Missing	Unique
22	0 (0.0%)	4

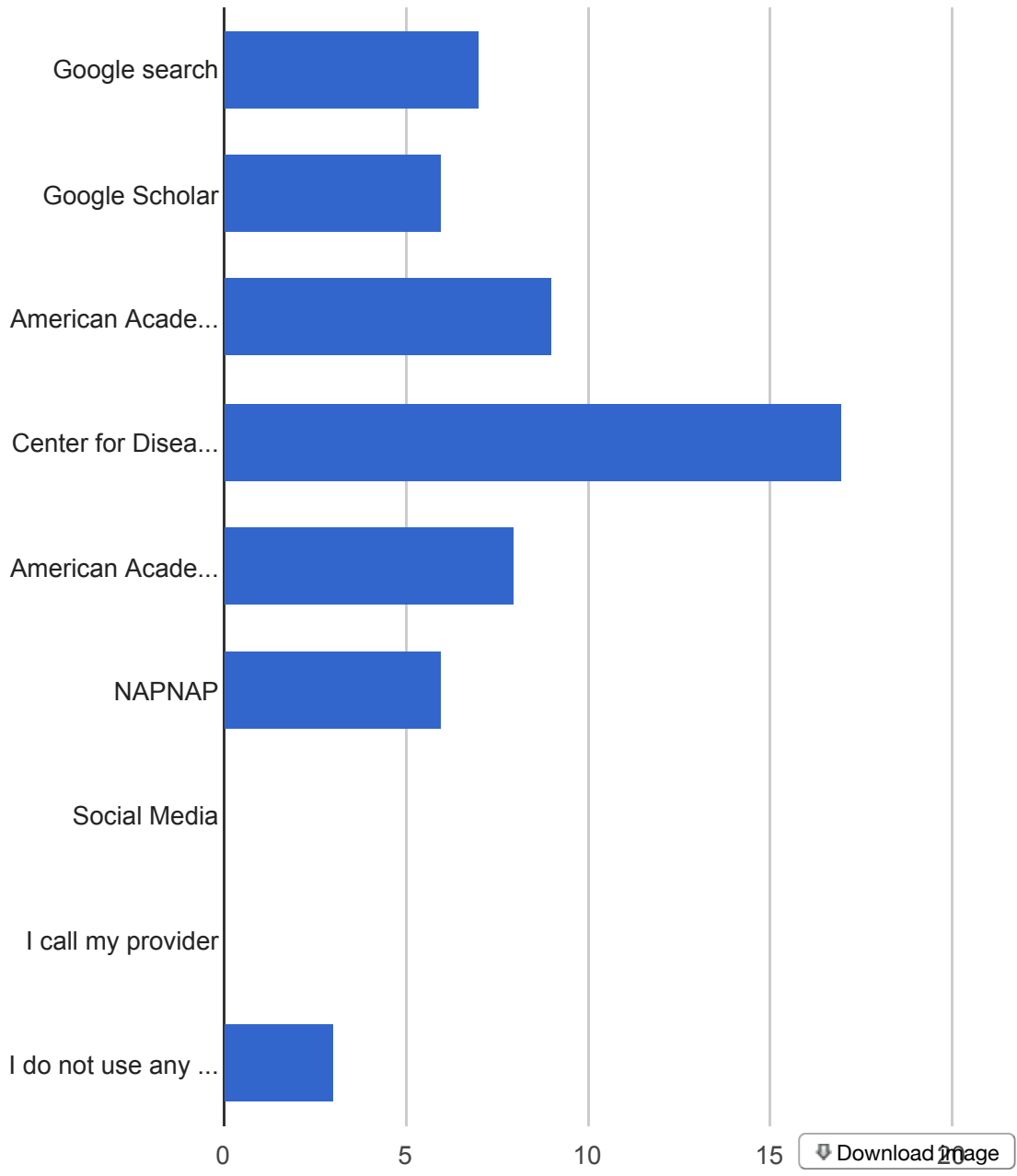
Counts/frequency: Never (2, 9.1%), Sometimes (5, 22.7%), Always (13, 59.1%), I do not see patients in a clinical setting (2, 9.1%)



When searching for medical guidance, do you primarily use a general search engine or seek professional guidance from an accredited source? Choose all that apply.

Total Count (N)	Missing	Unique
22	0 (0.0%)	7

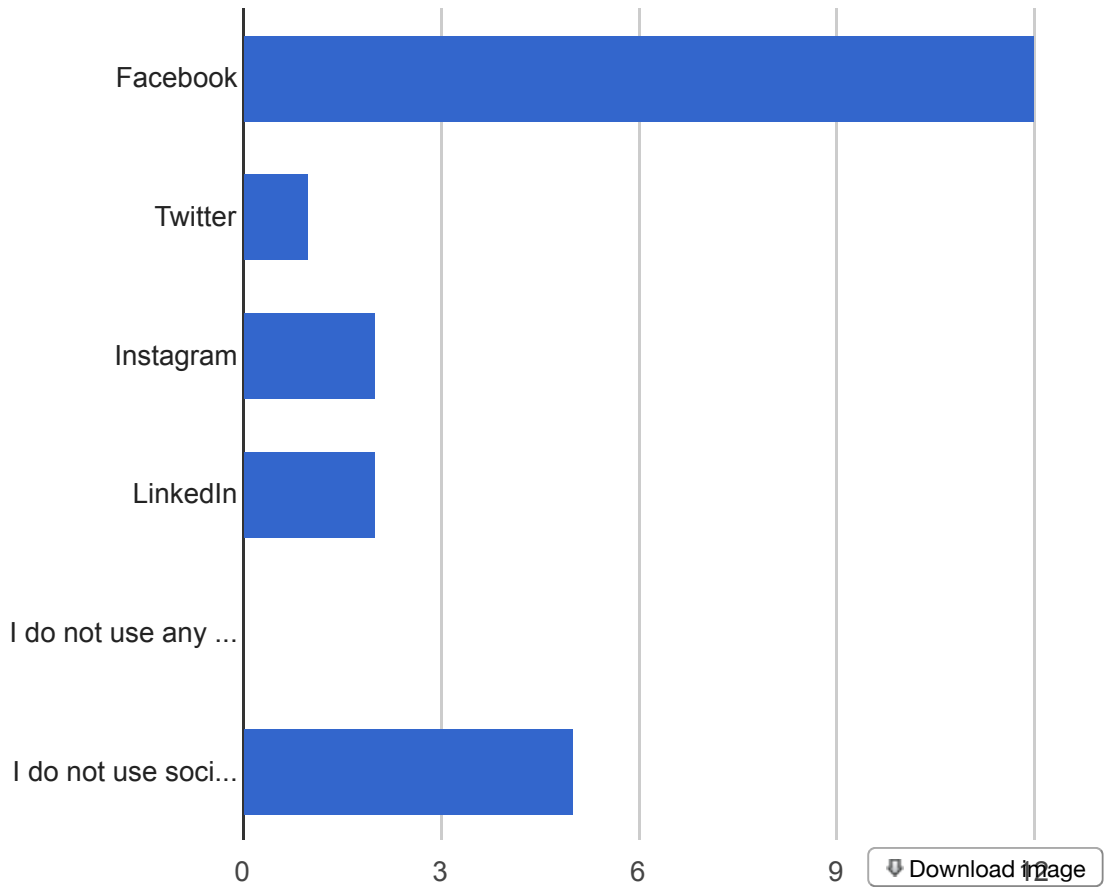
Counts/frequency: Google search (7, 31.8%), Google Scholar (6, 27.3%), American Academy of Pediatrics (9, 40.9%), Center for Disease Control (17, 77.3%), American Academy of Nurse Practitioners (8, 36.4%), NAPNAP (6, 27.3%), Social Media (0, 0.0%), I call my provider (0, 0.0%), I do not use any of the above methods (3, 13.6%)



What social media platform do you use the most, if any?

Total Count (N)	Missing	Unique
22	0 (0.0%)	5

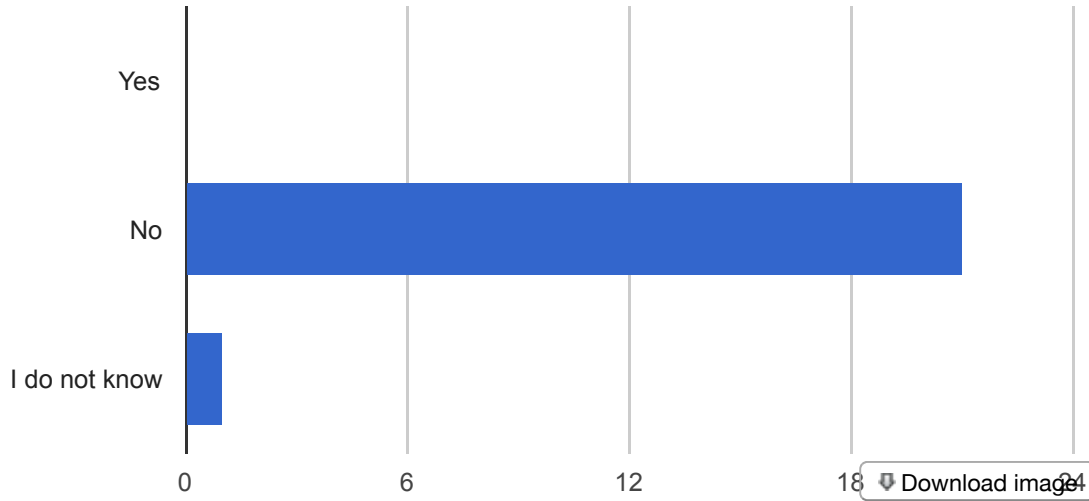
Counts/frequency: Facebook (12, 54.5%), Twitter (1, 4.5%), Instagram (2, 9.1%), LinkedIn (2, 9.1%), I do not use any of these forms of social media (0, 0.0%), I do not use social media (5, 22.7%)



To your knowledge, is there a cure for HPV?

Total Count (N)	Missing	Unique
22	0 (0.0%)	2

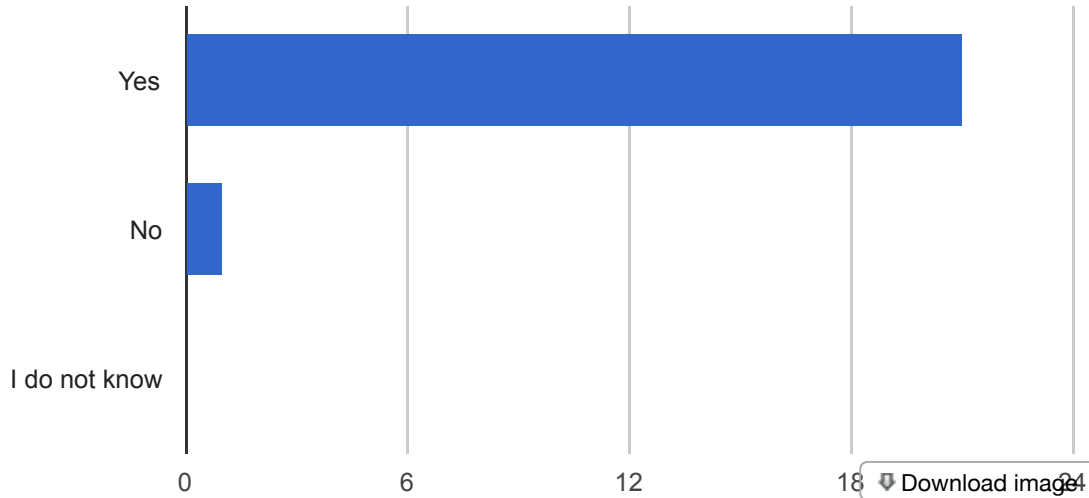
Counts/frequency: Yes (0, 0.0%), No (21, 95.5%), I do not know (1, 4.5%)



I think the HPV vaccine is safe and effective.

Total Count (N)	Missing	Unique
22	0 (0.0%)	2

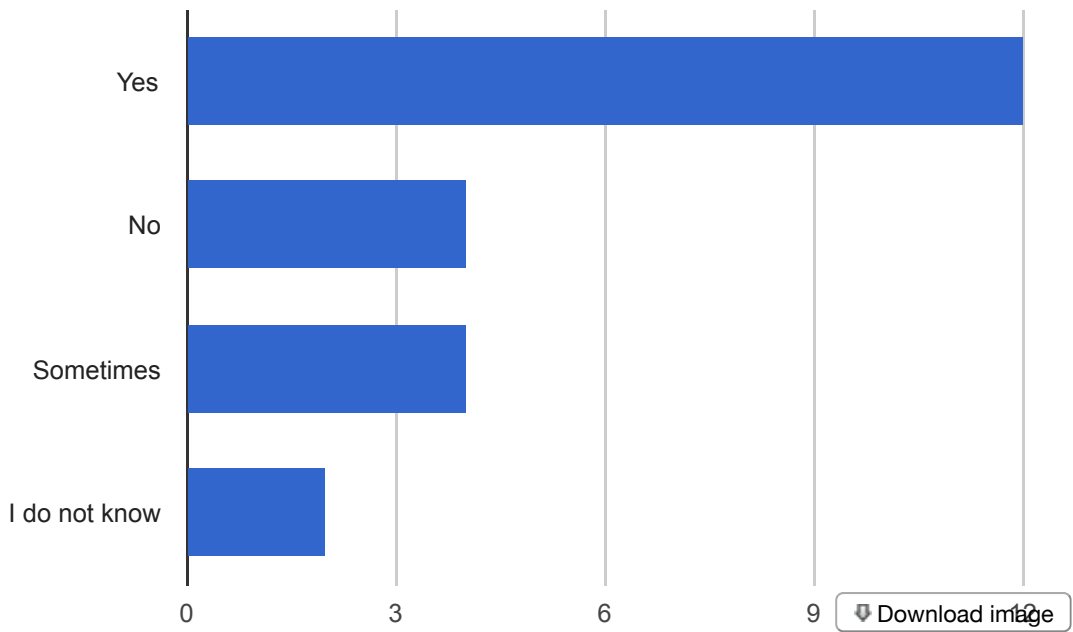
Counts/frequency: Yes (21, 95.5%), No (1, 4.5%), I do not know (0, 0.0%)



Do you feel there are barriers to the HPV vaccine in the primary care setting?

Total Count (N)	Missing	Unique
22	0 (0.0%)	4

Counts/frequency: Yes (12, 54.5%), No (4, 18.2%), Sometimes (4, 18.2%), I do not know (2, 9.1%)



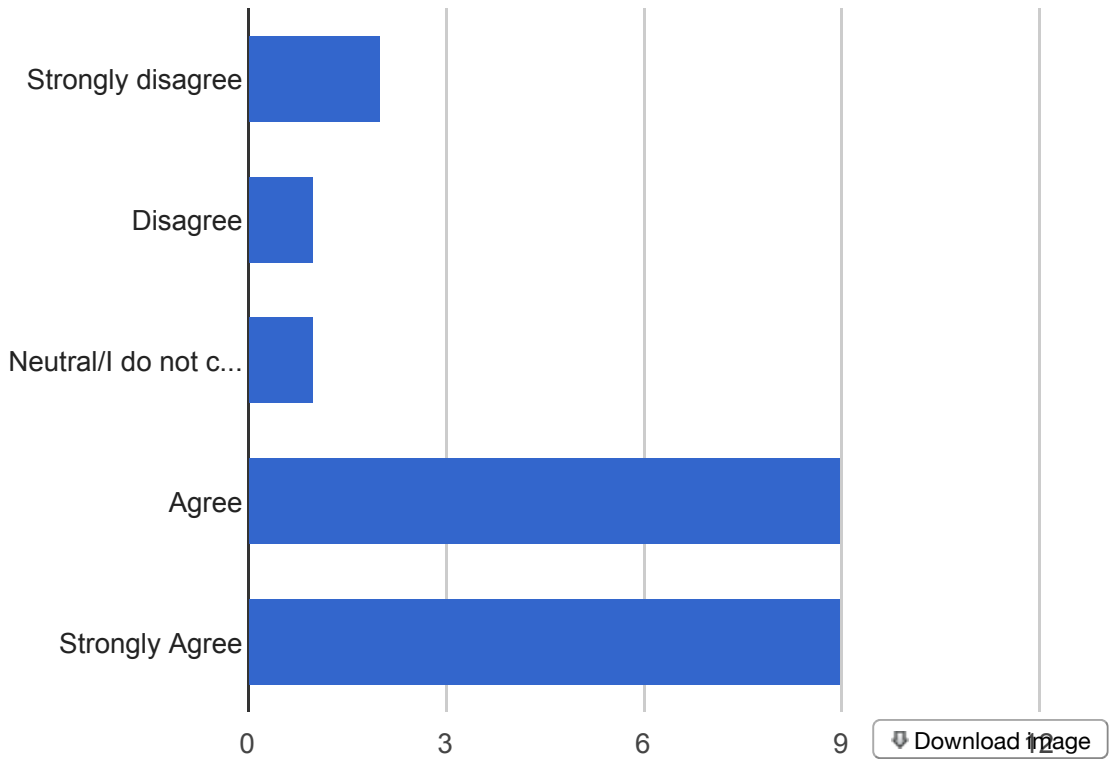
If you answered yes to the above questions, what specific barriers do you find?

Total Count (N)	Missing
14	8 (36.4%)

It is a priority that the HPV vaccine is administered at 11 and 12 year-old well-child check-ups.

Total Count (N)	Missing	Unique
22	0 (0.0%)	5

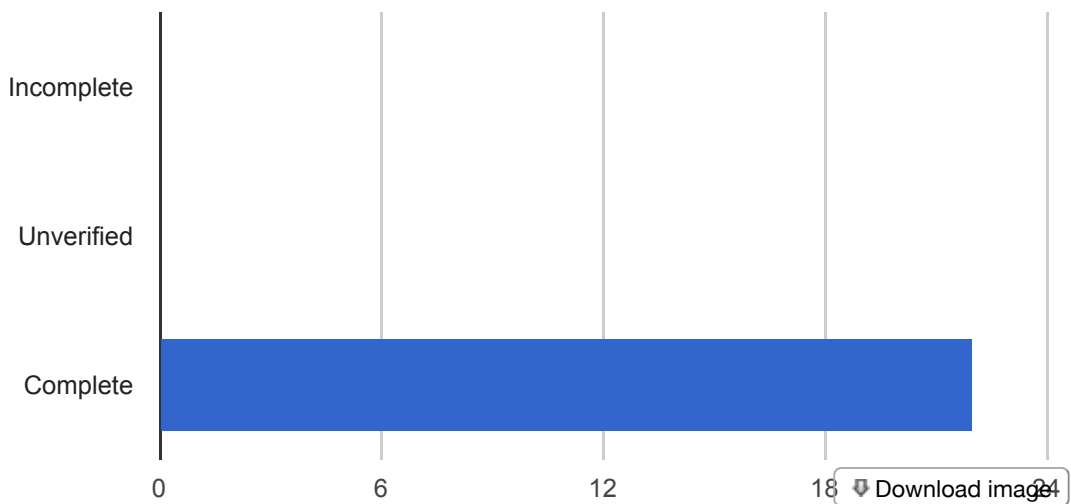
Counts/frequency: Strongly disagree (2, 9.1%), Disagree (1, 4.5%), Neutral/I do not care (1, 4.5%), Agree (9, 40.9%), Strongly Agree (9, 40.9%)



Complete?

Total Count (N)	Missing	Unique
22	0 (0.0%)	1

Counts/frequency: Incomplete (0, 0.0%), Unverified (0, 0.0%), Complete (22, 100.0%)



References

- American Cancer Society. (2014, September 19). What are the key statistics about cervical cancer?. Retrieved from <http://www.cancer.org/cancer/cervicalcancer/detailedguide/cervical-cancer-key-statistics>
- Center for Clinical and Translational Science, University of Kentucky. (2014, January 01). Redcap: Research informatics tool. Retrieved from <http://www.ccts.uky.edu/ccts/redcap-research-informatics-tool>
- Centers for Disease Control and Prevention. (2012, May 7). Epidemiology and prevention of vaccine-preventable diseases. Retrieved from <http://www.cdc.gov/vaccines/pubs/pinkbook/hpv.html>
- Center for Disease Control and Prevention. (2014, August 20). *Hpv vaccine* . Retrieved from <http://www.cdc.gov/vaccines/vpd-vac/hpv/>
- Centers for Disease Control and Prevention. (2014, June 5). *Hpv-associated cervical cancer rates by race and ethnicity*. Retrieved from <http://www.cdc.gov/cancer/hpv/statistics/cervical.htm>
- Center for Disease Control and Prevention. (2013, June 19). New study shows hpv vaccine helping lower hpv infection rates in teen girls. Retrieved from <http://www.cdc.gov/media/releases/2013/p0619-hpv-vaccinations.html>
- Center for Disease Control and Prevention. (2014, September 2). *Cervical cancer statistics*. Retrieved from <http://www.cdc.gov/cancer/cervical/statistics/>

EVALUATING PROVIDER KNOWLEDGE OF THE HPV VACCINE IN KENTUCKY

Centers for Disease Control and Prevention. U.S. Department of Health & Human Services, Vaccines and Immunizations (2014). You are the key to hpv cancer prevention. Retrieved from National Center for Immunization and Respiratory Diseases website:

http://www.cdc.gov/vaccines/ed/hpv/default.htm?s_cid=

Hughes, C., Jones, A., Feemster, K., & Fiks, A. (2011). Hpv vaccine decision making in pediatric primary care: a semi-structured interview study. *BMC Pediatrics*, 11(74), 1471-2431

Kahn, J., Cooper, H., Vadaparampil, S., Pence, B., Weinberg, A., LoCoCo, S., & Rosenthal, S. (2009). Human papillomavirus vaccine recommendations and agreement with mandated human papillomavirus vaccination for 11-to-12-year-old girls: a statewide survey of texas physicians. *American Association for Cancer Research*, 18(8), 2325-2332.

Moscicki, A. (2005). Impact of hpv infection in adolescent populations. *Journal of Adolescent Health*, 37(6), S3-S9. doi: 10.1016/j.jadohealth.2005.09.011

National Coalition of STD Directors. (2013, August 14). Checking in on hpv policy . Retrieved from <http://www.ncsddc.org/blog/checking-hpv-policy>

National Conference of State Legislatures. (2014). Hpv vaccine policies . Retrieved from website: <http://www.ncsl.org/research/health/hpv-vaccine-state-legislation-and-statutes.aspx>

National Network for Immunization Information. (2008, June 3). Mandatory hpv immunization for middle school girls. Retrieved from <http://www.immunizationinfo.org/issues/hpv-vaccines/mandatory-hpv-immunization-middle-school-girls>

EVALUATING PROVIDER KNOWLEDGE OF THE HPV VACCINE IN KENTUCKY

- Rimer, B., Harper, H., & Witte, O. U.S. Department of Health and Human Resources, (2014). Accelerating hpv vaccine uptake: urgency for action to prevent cancer. a report to the president of the united states from president. Retrieved from National Cancer Institute website:
http://deainfo.nci.nih.gov/advisory/pcp/annualReports/HPV/PDF/PCP_Annual_Report_2012-2013.pdf
- Stewart, A. (2008). Childhood vaccine and school entry laws: The case of hpv vaccine. Public Health Reports, 123(6), 801-803. Retrieved from
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2556726/>
- Sussman, A., Helitzer, D., Sanders, M., Urquieta, B., Salvador, M., & Ndiaye, K. (2007). Hpv and cervical cancer prevention counseling with younger adolescents: Implications for primary care. Annals of Family Medicine, 5(4), 298-304.
- U.S. Department of Health and Human Services. (2013). Hpv vaccine: What you need to know. Retrieved from <http://www.cdc.gov/vaccines/hcp/vis/vis-statements/hpv-gardasil.pdf>
- U.S. Food and Drug Administration. (2014, December 3). Hpv (human papillomavirus). Retrieved from
<http://www.fda.gov/ForConsumers/ByAudience/ForWomen/ucm118530.htm>