The association between provider recommendation and influenza vaccination status among children 6 months–17 years, United States, 2013–14 through 2015–16 influenza seasons
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Background:
While young children are particularly vulnerable to influenza, everyone 6 months and older is recommended to receive an influenza vaccination. Studies have shown that provider recommendation is associated with receipt of influenza vaccination.

Objectives:
To estimate the percentage of children 6 months–17 years for whom a provider recommendation for influenza vaccination was received, estimate influenza vaccination coverage by receipt of a provider recommendation, and identify factors associated with receipt of a provider recommendation.

Methods:
National Immunization Survey-Flu (NIS-Flu) data for the 2013–14, 2014–15, and 2015–16 influenza seasons were analyzed. Tests of association between provider recommendation and demographic characteristics were conducted using Wald chi-square tests and pairwise comparison t-tests. Multivariable logistic regression was used to determine variables independently associated with receiving a provider recommendation.

Results:
For all seasons studied, approximately 70% of children 6 months–17 years had a parent report receipt of a provider recommendation for influenza vaccination for their child. Children with a provider recommendation were more likely to be vaccinated compared with children without a provider recommendation (e.g., 72.2% versus 32.1% vaccinated in 2015-16). The strongest association between receipt of a provider recommendation and demographic characteristics during 2015-16 was with child’s age, with children 6–23 months, 2–4 years, and 5–12 years being more likely to have a parent report receipt of a provider recommendation (Adjusted Prevalence Ratio [APR] 1.31, 1.23, and 1.17, respectively) compared with children 13–17 years. In addition, children living in a household above poverty with household income >$75,000 were more likely to have a provider recommendation than children living below poverty (APR 1.06). These results were similar for the other seasons studied.

Conclusion:
This study affirms the importance of a provider recommendation for influenza vaccination among children. Ensuring that parents of all children receive a provider recommendation may improve vaccination coverage.
Using research to develop HPV messages for parents and healthcare professionals
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Background:
On-time vaccination rates with human papillomavirus (HPV) vaccine among 11-12 year olds remain suboptimal in the United States. Communications research findings can be used to refine strategy and build targeted messages to parents and pediatricians to improve HPV immunization attitudes and uptake.

Objectives:
Refine HPV messages and materials by assessing salience, credibility, and understanding among healthcare professionals (HCPs) and parents.

Methods:
From 2015 to 2017, we conducted a total of seven online surveys with parents and HCPs. Surveys assessed HPV vaccine knowledge, attitudes, and practices then drafted and tested educational messages among both groups.

Results:
Results from both parent and HCP surveys highlighted the need to emphasize HPV vaccine as cancer prevention and educate both audiences on HPV cancers other than cervical cancer. Additionally, HCPs surveyed believed HPV vaccination is important, yet some may not understand the need for on-time vaccination, and/or may underestimate the importance of their vaccine recommendation to parents. In both rounds of message testing with parents, a message that discussed HPV vaccination in the context of common healthy behaviors that can prevent cancer was reported as most noticeable, believable, and understandable. For HCPs, six of 16 messages tested resonated best with respondents in areas such as affect, informational value, and behavioral intention. These included messages that addressed HPV vaccine as cancer prevention, the importance of on-time HPV vaccination, and the impact of a strong provider recommendation on parents’ HPV vaccine acceptance.

Conclusion:
Parents preferred a message that contains specific suggestions for healthy behaviors and emphasizes HPV vaccine as a routine activity for cancer prevention. HCPs preferred messages that addressed cancer prevention, on-time vaccination, and the importance of their recommendation in convincing reluctant parents to accept HPV vaccine. To date, results have led to revision of HCP messages and creation of new products, such as videos and an infographic.
A cluster-randomized, pragmatic trial of a physician communication intervention for increasing adolescent HPV vaccination

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Background:
Studies show providers often do not recommend human papilloma (HPV) vaccines effectively for adolescents. Interventions to improve providers' HPV vaccine communication are needed.

Objectives:
To test the impact of a 5-component Provider HPV vaccine Communication intervention on adolescent HPV vaccination rates.

Methods:
Sixteen clinics (4 family medicine, 12 pediatric) participated in a cluster-randomized (at the clinic level), controlled trial that lasted 12 months. The 8 intervention clinics received training on 5 tools that could be used with parents before (tailored messaging website), during (customized HPV fact sheet, disease images, and provider communication training on using a “presumptive” vaccine recommendation followed by motivational interviewing for vaccine-hesitant parents) and at the end (HPV vaccine decision aid) of a clinic visit. Control practices continued usual care. Intention-to-treat analyses of absolute percentage point (PP) difference between intervention and control practices over time in HPV vaccination were assessed. Surveys assessed providers perceptions on the use and usefulness of the toolkit components.

Results:
There were no differences between control and intervention practices in baseline HPV vaccine initiation rates (37%) or average patient age (13 years, n=29,818 adolescents total). Intervention practices had significantly larger improvements in HPV vaccine initiation and completion than controls (Odds Ratio 1.46 series initiation, 1.56 series completion) representing 9.5 PP improvements in initiation and 4.4 PP improvements in completion. Subgroup analyses showed the intervention was effective for both adolescent sexes and all age groups, and primarily impacted private, pediatric clinics and well visits. Providers reported that the communication training was the most used and most useful toolkit component, followed by the HPV fact sheet. The website, disease images and decision aid were rarely used.

Conclusion:
A 5-component provider communication intervention resulted in a significant increase in HPV vaccine initiation and completion, compared to controls, in primary care clinics.
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National Association of County and City Health Officials (NACCHO) Human Papillomavirus (HPV) Vaccination Demonstration Sites Project: Local Health Department Strategies for Increasing HPV Vaccination Rates
Kimberly Scott, Michelle Cantu, Courtney Martin

Background:
Human papillomavirus (HPV) is a common infection in the United States, and despite the availability of an effective vaccine, vaccination rates consistently remain lower than other routinely recommended vaccines. To further explore LHD HPV vaccination efforts, NACCHO identified local health departments within states with the lowest HPV vaccination rates.

Setting:
NACCHO’s project aimed to assist LHDs in identifying effective strategies to increase HPV vaccination rates in their jurisdictions.

Population:
NACCHO supported two cohorts of 10 local health departments (LHDs) to develop action plans focusing on increasing HPV vaccine coverage among adolescents.

Project Description:
NACCHO devised an action planning process by which LHDs conducted an environmental scan of their community resources and stakeholders. Each LHD site identified focus areas to strategically guide the implementation of their project initiative to improve HPV vaccination rates. Sites received ongoing capacity building and technical assistance support over a 1 to 2 year timeframe. LHD’s participated in virtual and in-person meetings which provided opportunities to receive information from experts and national partner organizations.

Results/Lessons Learned:
Several key best practices for implementing a local-level HPV vaccination campaign were identified: stakeholder engagement, provider education and support, health information systems, and communication campaigns. Participating LHDs identified that stakeholder engagement and provider education improve individual’s understanding of the importance of HPV vaccination. Health information systems facilitated data analysis and effective communication campaigns were integral to tailoring HPV prevention messages and reducing stigma. To better conduct provider, parent, and system-level interventions to increase HPV vaccination, it is recommended to develop a clear and concise action plan for implementation and sustainability, serve as an accessible resource to the community, conduct education and outreach with providers on the importance of HPV vaccination and messaging, and to include HPV coverage rates in Assessment, Feedback, Incentives, and eXchange site visits.