Pervasive disparities exist in morbidity and mortality rates for cervical and other HPV-related cancers among Black, Hispanic, and low-income individuals compared to other groups.\textsuperscript{1,2} New Jersey has the 10\textsuperscript{th} highest morbidity rate for cervical cancer nationally for 2006-2010.\textsuperscript{3} Our previous work shows dramatically lower HPV vaccination rates for 2011 among adolescents in the Greater Newark area (27\% initiation; 8\% completion)\textsuperscript{5} compared to national rates for the same year (53\% initiation; 35\% completion).\textsuperscript{2} This is far below Healthy People 2020’s goal of 80\% completion rate for the HPV vaccine 3-dose series for 13-15 year old females.\textsuperscript{8} In addition, our prior work using focus groups shows the importance of healthcare providers’ (HCPs) recommendation in the HPV vaccine decision-making process among Black and Hispanic mothers.\textsuperscript{9,10} Yet, studies have repeatedly shown that HCPs are not discussing the HPV vaccine with parents.\textsuperscript{11-14} Literature is lacking on developing HCP-targeted strategies to improve HPV vaccination in low-income populations. Therefore, the purpose of this study was to examine HCP recommendation of the HPV vaccine and their knowledge, beliefs, perceived barriers, and cues to action for recommending and discussing the HPV vaccine with parents. This is a cross-sectional study, using an anonymous web-based survey of 380 healthcare providers in New Jersey. The study included physicians (75\%) and nurse practitioners (25\%) in pediatrics (62\%), women’s health (18\%), and family medicine (20\%). The survey assessed HCP recommendation of the HPV vaccine, their knowledge about the vaccine, their beliefs about the safety and efficacy of the vaccine, and perceived barriers, and cues for recommending and discussing the HPV vaccine with parents. Perceived barriers included work environment and system-related barriers, barriers in communicating and discussing the vaccine with parents of low-income adolescents, concerns about the vaccine, and challenges related to completion of the multi-dose series. Cues to action included whether the influence of colleagues, personal experiences, involvement in coalitions, and awareness of national vaccine recommendations. Study results indicate that the rates of HCP’s recommendation for the HPV vaccine are 73\% for all adolescents, 77\% for female adolescents, 67\% for male adolescents, and 57\% for adolescents 11-13 years old. The HCP’s recommendation was significantly associated with higher levels of knowledge about the HPV vaccine, higher levels of perceived benefits for the HPV vaccine, lower levels of perceived harm associated with the HPV vaccine, lower levels of perceived barriers, and higher level of cues to action. Significant barriers included being concerned about the financial burden of the HPV vaccine on parents and being uncomfortable discussing the sexual nature of the HPV vaccine with parents. More importantly, HCP recommendation of the HPV vaccine is significantly associated with work environment and system-related barriers, including difficulties in ordering and/or stoking the vaccine, inadequate support staff to administer the HPV vaccine, and reimbursement issues for the vaccine or administration of the vaccine. The study findings provide insight for interventions to engage HCPs to improve HPV vaccination. In conclusion, The President’s Cancer Panel’s (PCP) report\textsuperscript{15} on accelerating HPV vaccine uptake in the US identified the first goal in this effort is to reduce missed clinical opportunities to recommend and administer HPV vaccines. This study addresses the first objective in achieving the PCP’s first goal through developing integrated, comprehensive communication strategies for HCPs and for improving the work environment to optimize patient outcomes related to HPV vaccination as well as long-term reductions in HPV-related cancers. The study findings inform the development of interventions and strategies to establish healthy working practices and environments in order to reach Healthy People 2020’s objectives for HPV vaccination among adolescents.

Title: The Work Environment and Healthcare Provider Recommendation of the HPV Vaccine

Keywords: Adolescent Health, Cancer Prevention and Papillomavirus Vaccines
References:


Abstract Summary:
This study examines healthcare providers' recommendation of the HPV vaccine and their knowledge, beliefs, perceived barriers, and cues to action for recommending and discussing the HPV vaccine with parents, using an anonymous web-based survey of 380 healthcare providers (physicians and NPs) in pediatrics, women's health, and family medicine.

Content Outline:
The Work Environment and Healthcare Provider Recommendation of the HPV Vaccine

1. Introduction and background on HPV vaccination
2. The role of healthcare providers (HCPs) in improving HPV vaccination
3. The impact of the work environment on HPV vaccination
4. The study purpose and research questions
5. The study methods and procedures
6. Study results
   1. HCP's recommendation for the HPV vaccine
   2. Knowledge among HCPs about the vaccine
   3. Beliefs of the HCPs around the safety and efficacy of the vaccine
   4. Perceived work environment and system-related barriers
   5. Perceived barriers in communicating and discussing the vaccine with parents
   6. HCP's concerns about the vaccine
   7. Challenges related to completion of the multi-dose series
   8. Cues to action for HCP's recommendation of the HPV vaccine
   9. Predictive factors for the HCP's recommendation for the HPV vaccine
7. Discussion
8. Implications for research, policy, and practice

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