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PRIMARY CARE PROFESSIONALS' COMMUNICATION AND HPV VACCINE ACCEPTANCE IN NIGERIA: A CROSS-SECTIONAL STUDY

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Introduction

Cervical cancer remains a major public health concern in Nigeria, and human papillomavirus (HPV) vaccination is a central preventive intervention. However, vaccine acceptance can be influenced by parental concerns, misinformation, perceptions of vaccine safety, and the quality of communication with healthcare professionals. Primary care health professionals (PCHPs), including physicians, nurses, midwives and community health extension workers, can help parents make informed vaccination decisions (Raimi *et al.,* 2020; Raimi & Raimi, 2020; Raimi *et al.,* 2021; 2022; Tinimoye *et al.,* 2026). Understanding their communication practices, perceived influence, and training needs is therefore important for strengthening HPV vaccination programmes. This study examined Nigerian PCHPs' perceptions of their influence on parental HPV vaccine acceptance and identified communication practices, challenges, and training experiences associated with greater perceived influence. The study aimed to assess PCHPs' perceived influence on parental HPV vaccine acceptance; describe their communication practices and challenges; examine associations between communication training and perceived influence; and identify opportunities to strengthen HPV vaccine communication in primary care.

Methodology

A cross-sectional online survey was reportedly conducted between May and July 2022 among licensed PCHPs involved in HPV vaccination for children aged 9-12 years. Eligible professionals participated in activities such as assessing vaccine eligibility, recommending vaccination,

discussing benefits and risks, addressing parental concerns, and administering the vaccine. The study description reports recruitment through a professional provider network, with quotas intended to diversify professional groups and include rural and underserved settings. Although the source description refers to adaptation of a United States study methodology, the sampling frame and recruitment procedures supporting the Nigerian sample require confirmation before the findings can be considered nationally representative. A total of 2,527 professionals reportedly completed the survey, with a stated response rate of 57%. Following exclusions or incomplete records, the final analytical sample comprised 2,402 respondents. The protocol was reported to have received approval from the Niger Delta Institute for Emerging and Re-emerging Infectious Diseases Research Ethics Committee, and participants provided informed consent. The primary outcome was perceived communication influence, measured on a scale from "not at all" to "extremely" and dichotomised into "great influence" versus "little or some influence." Explanatory variables included professional training, use of presumptive recommendations, communication challenges, and previous HPV vaccination training. Descriptive statistics and bivariate and multivariable logistic regression analyses were reportedly conducted using Stata 16.1, with two-sided statistical tests and a significance threshold of $p < 0.05$.

Results

Of the 2,402 PCHPs in the final analytical sample, 1,313 (54.7%) reported that their communication had a great influence on parental HPV vaccine acceptance, 885 (36.8%) reported some influence, and 204 (8.5%) reported little influence. These categories sum to the analytical sample and indicate that just over half perceived their communication as having a great influence; they do not measure parents' actual acceptance or vaccination uptake. Respondents were predominantly women (72%). Reported ethnic affiliations included Yoruba (55%), Igbo (15%) and Hausa (12%). Professional groups included paediatricians (27%), family medicine physicians (22%), advanced practice providers (24%), and clinical staff (26%). Approximately 58% reported using presumptive recommendations when discussing HPV vaccination. The most frequently reported communication challenges were parents' belief that their child did not need HPV vaccination at the time of the visit (81%), concerns about vaccine safety (70%), and the belief that vaccination could promote sexual activity (66%). Mistrust of providers was less frequently reported (12%). Training exposure was limited: 41% reported HPV vaccination training associated with continuing medical education credits, 39% reported training on addressing parental hesitancy, and 24% reported training on the roles of the primary care team. Role-play exercises and cancer-survivor testimonials were each reported by 9% of respondents. In multivariable analyses, use of presumptive recommendations was associated with higher odds of reporting a great communication influence (adjusted odds ratio [aOR], 1.32; 95% confidence interval [CI], 1.11-1.57). Reporting parental concerns that HPV vaccination could promote sexual activity was also associated with higher odds of perceived great influence (aOR, 1.26; 95% CI, 1.06-1.51). Previous training on addressing parental hesitancy (aOR, 1.25; 95% CI, 1.02-1.54) and on the roles of the primary care team in HPV vaccination (aOR, 1.26; 95% CI, 1.02-1.57) showed similar positive associations. These are adjusted associations and do not establish that the communication practices or training caused greater influence or increased vaccination uptake. The findings highlight the importance of provider communication and professional development in HPV vaccination programmes. They also identify a gap between the reported influence of communication and the availability of structured training to support consistent, evidence-based conversations with parents. The study's contribution is to identify potentially modifiable communication practices and training experiences for further evaluation in Nigerian primary care settings.

Conclusion

Most surveyed PCHPs believed their communication had a substantial influence on parental HPV vaccine acceptance. Presumptive recommendations and training in addressing hesitancy and clarifying team roles were associated with stronger perceived influence. However, the cross-sectional design and self-reported outcome do not establish effects on actual vaccination uptake.

HPV communication training should be integrated into continuing professional development and delivered across the primary care team, with practical exercises addressing safety concerns, misconceptions about sexual activity and the cancer-preventive benefits of vaccination. Future evaluations should determine whether such interventions improve parental acceptance and documented vaccine uptake.

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