Human Papillomavirus (HPV) Vaccination in Nigeria: Is It Equitable?

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Dear Editor,

Globally, human papillomavirus (HPV) has been largely recognized as a leading cause of cervical cancer, with increasing indications of its significance in other anogenital cancers (anus, vulva, vagina, penis), head and neck cancers as well as genital warts.[1,2] HPV comprises more than 100 serotypes, which are categorized as either low-risk or high-risk serotypes.[3] Among these, 30 serotypes target the genitals, with approximately 15 linked to cancer (high-risk HPV). In estimate, around 75% of people will contract HPV at some stage in their lives, and by the age of 50 years, at least 80% of women will have been infected by the virus.[3] The popularity of this lethal infection among men and women depicts a dire need for interventions through vaccination programs.[4] HPV vaccines have been rolled out and implemented as routine immunization schedules in the United States, Australia, and most European countries[5,6]; however, a huge gap in vaccination exists in some African countries like Nigeria.

Nigeria, otherwise known as the giant of Africa, which constitutes the largest population in Africa, should expectedly take the lead in providing public health interventions toward combating infectious diseases like HPV. Unfortunately, there is laxity, shallowness, and a lack of equity in HPV vaccination in the country. Despite the significant mortality rate from HPV-related cancers in low- and middle-income countries, it took Nigeria more than a decade to roll out HPV vaccine.[7] Strikingly, after the massive HPV vaccine roll-out in October 2023, there has been centralization and obvious imbalance in its administration—only girls aged between 9 and 14 years are eligible for the vaccine uptake.[8] No arrangement for inclusion has been made for boys, despite the fact that the HPV vaccine type could be taken by boys as well.[9] This does not correspond with the recommendation from the Centers for Disease Control and Prevention, which suggests that all preteens (starting at the age of 9 years) need HPV vaccination, so they are protected from HPV infections that can cause cancer later in life.[10] Also, the UK government, after deliberations on issues about HPV vaccinations and health economics, deemed it cost-effective to vaccinate boys to circumvent the burden of managing HPV-related cancers in men in later years.[11]

Unarguably, cervical cancer in women is the most prevalent HPV-related cancer. However, boys also carry this transmissible virus (which they can transmit to girls) and are highly susceptible to developing oral cancer (a health condition that has seen a significant rise in cases in recent years)—this is in addition to penile and anal cancer.[12] In the 2023's HPV and related diseases in Nigeria report,[1] the HPV Information Centre evidenced that Nigeria contributes significantly to the prevalence of anal cancer and head and neck cancers among men in West Africa and globally. For anal cancer, Nigeria contributes around 62% of new cases and 62% of mortality in West Africa, while globally, Nigeria accounts for 3% of new cases and 5% of mortality. For head and neck cancers, Nigeria contributes approximately 47% of new cases and 46% of mortality in West Africa, while globally, Nigeria accounts for 0.3% of new cases and around 0.4% mortality.[1] Given the substantial contribution of Nigeria to the prevalence of these cancers regionally and globally, it becomes crucial for boys to receive the HPV vaccine in Nigeria. Also, in a study by Grandahl et al,[12] which was conducted in Sweden, upper secondary school male students were interviewed on awareness, perceived benefits, and intention to be vaccinated. The boys suggested that there

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ought to be equitable access to vaccination, asserting that they should also receive the vaccine designed to prevent a potentially fatal disease like cancer that poses a threat to their health as well.[12] The sentiment expressed by the male students in Sweden regarding equitable access to HPV vaccination highlights a universal concern applicable to various societal contexts, including Nigeria.

It is possible that the economic implications of administering the vaccine to boys and girls, vaccine hesitancy, and a lack of adequate skilled manpower may be factors affecting equitable administration of HPV vaccines to both boys and girls in Nigeria; however, prevention is always better than cure. Efforts should be made to ensure equity in HPV vaccination in Nigeria. Boys should be vaccinated as well. Equitable HPV vaccination in Nigeria will cause a significant reduction in HPV-related cancers, thus achieving a healthier population.

Ethical Approval Statement
Not applicable. This study is a scoping review.

Data Availability Statement
Data sharing is not applicable to this article as no new data were created or analyzed in this study. All authors have read and approved the final version of the manuscript. Kehinde Kazeem Kanmodi had full access to all of the data in this study and takes complete responsibility for the integrity of the data and the accuracy of the data analysis.

Transparency Statement
The corresponding author—Kehinde Kazeem Kanmodi—affirms that this manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.

Ethical Considerations
Not applicable. This study did not collect data from human or animal subjects but an open research repository.

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Conflict of Interest
None declared.

References
1 Bruni L, Albero G, Serrano B, et al. ICO/IARC Information Centre on HPV and Cancer (HPV Information Centre) Human Papillomavirus and Related Diseases in Nigeria. Summary Report Published 10 March 2023. Accessed March 01, 2024
2 Grennan D. Genital warts. JAMA 2019;321(05):520
3 Krashias G, Koptides D, Christodoulou C. HPV prevalence and type distribution in Cypriot women with cervical cytological abnormalities. BMC Infect Dis 2017;17(01):346
4 Kombe Kombe AJ, Li B, Zahid A, et al. Epidemiology and burden of human papillomavirus and related diseases, molecular pathogenesis, and vaccine evaluation. Front Public Health 2021;8:552028
5 Colzani E, Johansen K, Johnson H, Pastore Celentano L. Human papillomavirus vaccination in the European Union/European Economic Area and globally: a moral dilemma. Euro Surveill 2021;26(50):2001659
6 Patel C, Brotherton JM, Pillsbury A, et al. The impact of 10 years of human papillomavirus (HPV) vaccination in Australia: what additional disease burden will a nonavalent vaccine prevent? Euro Surveill 2018;23(41):1700737
7 Balogun FM, Omotade OO, Svensson M. Stated preferences for human papillomavirus vaccination for adolescents in selected communities in Ibadan, Southwest Nigeria: a discrete choice experiment. Hum Vaccin Immunother 2022;18(06): 2124091
8 Makoni M. HPV vaccine roll-out in Nigeria and Bangladesh. Lancet Oncol 2023;24(12):1311–1312
9 UNICEF. The HPV vaccine in Nigeria: A guide for parents [Internet]. Accessed April 20, 2024 at: https://www.unicef.org/nigeria/hpv-vaccine-nigeria-guide-parents
10 Centers for Disease Control and Prevention (CDC) Human Papillomavirus (HPV) Vaccination: What Everyone Should Know [Internet]. Accessed April 20, 2024 at: https://www.cdc.gov/vaccines/vpd/hpv/public/index.html#:~:text=for%20These%20Vaccines%3F-,Who%20Should%20Get%20HPV%20Vaccine%3F,cause%20cancer%20later%20in%20life. Published 16 November 2021
11 Kmietowicz Z. Boys should be given HPV vaccine, says joint committee. BMJ 2018;362:k3163
12 Grandahl M, Nevéus T, Dalianis T, Larsson M, Tydén T, Stenhammar C. 'I also want to be vaccinated!' - adolescent boys' awareness and thoughts, perceived benefits, information sources, and intention to be vaccinated against human papillomavirus (HPV). Hum Vaccin Immunother 2019;15(7-8): 1794–1802