

Beyond Vaccine Availability: Community Trust and Human Papillomavirus Vaccine Acceptance in Sub-Saharan Africa: A Narrative Review

Olamide Peter Olaobaju ¹, Jennifer Abraham ², Taiwo Bakare-Abidola ³,
Kehinde Abiola Bakare-Adesokan ²

¹ *Obafemi Awolowo University*
Ile-Ife, 220282, Osun, Nigeria

² *Lagos State University*
Lasu Main Rd, Ojo, Lagos 102101, Lagos, Nigeria

³ *Georgia Southern University*
1332 Southern Drive, Statesboro, GA 30458, USA

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Corresponding Author:
[Olamide Peter Olaobaju](#)

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Abstract. Even though most cases of cervical cancer are preventable with human papillomavirus (HPV) vaccines, cervical cancer continues to be a public health problem in sub-Saharan Africa. HPV vaccines have long been available, but vaccine coverage remains far below the global goal in the region. However, structural barriers contribute to this disparity, and they cannot fully explain a community's occasional failure to accept vaccines. This narrative review explored community trust as a determinant of HPV vaccine acceptance in sub-Saharan Africa. It examined evidence identified from PubMed, Scopus, Google Scholar, Web of Science, and the World Health Organisation (WHO) Institutional Repository. The literature search (May to July 2026) yielded around 180 records, of which 36 were included in the synthesis. All studies reviewed found strong community trust to underlie other factors that influence vaccine uptake. Where trust was lower, gaps in knowledge, misinformation, healthcare worker recommendations, attitudes of traditional and religious leaders, and family decisions had a greater impact; the opposite was true with heightened trust. This pattern was found in various contexts in Rwanda, Tanzania, Nigeria, Kenya, Uganda and Malawi. The results here indicate that simply bolstering HPV vaccine supply and service delivery is not enough. Ongoing, meaningful engagement to build and maintain community trust should be considered an essential element of HPV vaccination programmes in sub-Saharan Africa.

Keywords: Vaccines; WHO programmes; Diseases; HPV-Vaccine.

INTRODUCTION

Persistent infection with high-risk strains of the human papillomavirus (HPV) is the cause of cervical cancer, which continues to be one of the most important causes of morbidity and mortality due to cancer in women in sub-Saharan Africa. While there is a high burden of the disease in the region, it is largely preventable with HPV vaccination, screening and early treatment. Nigeria has an

annual incidence of around 14,000 new cases and 8,000 deaths due to the condition [1, 2]. These figures underscore the ongoing burden of cervical cancer, in the face of available effective prevention tools.

The World Health Organisation responded to this burden by establishing the Global Strategy to Accelerate the Elimination of Cervical Cancer, which is based on the 90-70-90 targets: vaccinating 90%

of girls against HPV before the age of 15 years, screening 70% of women by ages 35 and 45 years, and treating 90% of women diagnosed with cervical disease [3]. The targets are evidence of the WHO's approach to making cervical cancer a public health problem. Although safe and effective vaccines are available, coverage with them remains low in most parts of sub-Saharan Africa.

Early reasons for low vaccine uptake centred on structural problems, such as vaccine shortages, health worker shortages, weak health systems, and limited access to vaccine services [4, 5, 21, 22]. These challenges are relevant but do not fully explain why communities fail to accept vaccination, even when it is free. A 2024 survey of 1,071 caregivers in Kano State, Nigeria, found that 32.7% said they would NOT accept HPV vaccines, even if they were free. This study indicates that high vaccine coverage requires not only making HPV vaccines available but also increasing acceptance [6]. While the literature raises these barriers, it has paid little attention to how they interact to influence HPV vaccine uptake [4, 5, 30]. These factors are typically raised in isolation, but are increasingly acknowledged as key influences on HPV vaccine uptake. They may be linked through community trust. We conducted a narrative review to explore how community trust contributes to HPV vaccine uptake in sub-Saharan Africa and implications for programmes aiming to enhance HPV vaccine uptake.

METHODS

This narrative review integrates findings from quantitative studies, qualitative research, programme evaluations and reports from international health organisations to investigate the role of community trust in HPV vaccine acceptance in sub-Saharan Africa. A narrative review was the appropriate methodological approach, as it brought together evidence from a variety of study designs and sources [7]. We conducted the literature search from May to July 2026 in PubMed, Scopus, Google Scholar, Web of Science, and the WHO Institutional Repository for Information Sharing. We used Boolean operators to match Medical Subject Headings (MeSH) and free-text terms, such as medical subject heading, human papillomavirus, HPV vaccine, vaccine hesitancy, vaccine confidence, community trust, health communication, community engagement, sub-Saharan Africa, and Nigeria, to identify relevant publications. We included studies that examined HPV vaccination or vaccine acceptance in sub-Saharan Africa and

addressed at least one of the four demand-side factors: trust, vaccine hesitancy, knowledge, or community engagement. We prioritised English-language publications from 2017 to 2025, but included earlier publications when they provided key evidence to support the findings. We excluded studies exclusive to the supply side, as well as those outside sub-Saharan Africa whose results we deemed not relevant to the region's context.

The search identified about 180 records. After the screening of title/abstract, 68 articles were selected for full-text review. The initial corpus consisted of 36 documents: 28 peer-reviewed publications and 8 grey literature sources. The search was subsequently refined in August 2026 to include more peer-reviewed evidence and policy documents generated through mid-2026, including a geographic and programmatic expansion to include more evidence and policy documents from South Africa, Ghana, and global immunisation policy sources. The current update included 14 peer-reviewed publications and 2 institutional policy documents from Ethiopia, Zambia, The Gambia, Nigeria, Cameroon and South Africa, bringing the total number of documents to 53. These were arranged thematically under community trust, misinformation, influence of healthcare workers, roles of traditional and religious leaders, health communication strategies, socioeconomic factors, programme delivery and policy design and intervention outcomes. This review is based on the author's experience as an Independent Monitor for the HPV vaccination campaign phase 2 in rural Oyo State, 2024, conducted by the Oyo State Primary Health Care Board. If field observations have been completed, they are presented as reflective practice to provide contextual understanding and are not considered research evidence.

RESULT AND DISCUSSION

Table 1 summarises the key themes identified in the reviewed literature. Overall, the research indicates that the determinants of HPV vaccine acceptance in sub-Saharan Africa are not stand-alone barriers, but systemic determinants that operate through a shared lens: community trust.

A chain of relationships influences acceptance of, or reluctance to, HPV vaccination: trust in the healthcare worker giving the vaccine, trust in traditional and religious leaders, and trust in the government programme giving the vaccine. Vaccination rates are more likely to be high when these

relationships are good. Information-based campaigns, free vaccines, and well-resourced

vaccination services are often inadequate to overcome vaccine hesitancy where they are weak [21, 22].

Table 1 – Community Trust Themes, Evidence, and Practical Implications

Theme	Evidence	Practical Implication
Knowledge gaps	Only 4.2% of Kano caregivers had heard of HPV; parents unaware showed nearly 3x higher odds of hesitancy (OR: 2.86, 95% CI: 1.28-6.40) [6]	Health education should begin before campaign rollout and be delivered through sources communities already trust
Misinformation	Infertility and population-control beliefs documented across Nigeria, Kenya, Uganda, and Malawi; misinformation spreads more readily where institutional trust is low [7, 8, 9]	Myth correction is more effective when done proactively, before campaigns begin, through trusted community channels.
Healthcare workers	Absence of a healthcare provider recommendation was cited by 20.3% of hesitant parents in Kano State [6, 10]	Communication training for frontline vaccinators should emphasise listening, patience, and respectful engagement.
Traditional leaders	Endorsement by the Sultan of Sokoto contributed to coverage improvements in Northern Nigeria; early leader engagement reduces community resistance [7, 13]	Involve traditional leaders from programme planning, not at the point of delivery.
Religious leaders	Religious leaders' positive attitudes predicted vaccine uptake among congregants in Kenya; cleric-led impact was documented in Katsina [15, 16]	Religious leaders need time and information to become effective advocates; engagement before campaign launch is essential.
Health communication	Dialogue-based communication produced better outcomes than one-way messaging; Rwanda and Tanzania both demonstrate what high-trust implementation achieves [19, 20]	Community engagement should be ongoing rather than campaign-specific and should adapt to local languages and concerns.
Socioeconomic factors	Competing household priorities, including food insecurity, shape vaccine decisions in resource-limited settings [6]	Where possible, vaccination programmes should be linked with broader community support rather than delivered in isolation.
Gender dynamics	Fathers in Kano State showed 69% higher adjusted odds of hesitancy than mothers (OR: 1.69, 95% CI: 1.24-2.32) [6]	Programmes need to engage male caregivers directly, particularly in households where men hold decision-making authority.

Lack of knowledge and misinformation are other vulnerabilities. In 2024, a study in Kano State, Nigeria, found that only 4.2% of caregivers had heard of HPV and 5.1% were familiar with the HPV vaccine [6, 15]. While these results indicate significant knowledge gaps, they are only part of the vaccine hesitancy problem. Limited knowledge was close to three times more likely to be associated with refusal of the HPV vaccine than knowledge by the caregiver, meaning that if they had never heard about HPV, they were more likely to be susceptible to other influences [6]. Those gaps are often filled with misinformation in environments where the public does not trust health institutions to provide reliable health information.

But similar stories emerge all over the region: the HPV vaccine leads to infertility, encourages young women to have sex earlier, or is part of a larger population control agenda [7,8]. These fears are not just isolated misconceptions. They spread through known community networks and are trusted in areas where communities lack trust in official health messages. This was the case in Malawi and Zambia in 2023, where both countries had access to HPV vaccines but with different coverage levels: 28% in Malawi and 58% in Zambia [9]. Vaccine availability is only part of the explanation, as community-level factors also play a role. This was evident in the rural settlements monitored during the 2024 round, as reported here as reflective practice rather than primary research data. Some caregivers doubted the relevance of HPV vaccination, citing older generations who

said their mothers or grandmothers had lived long lives without HPV vaccination or other cancer prevention measures. Others mentioned immediate household needs, including that "food would have been more valuable than vaccination". These answers are unlikely to be addressed with information materials. Instead, they reflect underlying issues in community/health system partnerships, as reported elsewhere [10, 11].

Traditional leaders, religious leaders, and healthcare workers. The first trust that must be established in a vaccination encounter is between the caregiver and the health worker who gives the vaccine. Several studies have shown that patient trust in the person providing health care is a stronger driver of vaccine uptake than confidence in the health system as a whole [12]. Nearly one in five caregivers reported that they did not vaccinate their children with HPV vaccines because there was no doctor's recommendation in Kano State [6]. Most of the parents who chose not to vaccinate didn't necessarily oppose vaccines, but they hadn't been recommended for them.

Healthcare workers' communication is also significant. In 2024, shown here as a form of reflective practice, vaccinators who listened to caregivers' concerns and responded patiently faced less resistance than those who tried to prioritise efficient completion of household visits. The difference was not the vaccine or the information, but the quality of the interactions [10].

Another source of trust is traditional and religious leaders. Public endorsement by the Sultan of Sokoto and the Northern Traditional Leaders Council (NTLC) of the polio and HPV vaccination campaigns in Nigeria resulted in increased vaccine coverage in traditionally resistant communities [13]. Early interventions with traditional leaders helped launch an active campaign in Kwara State, where vaccination teams reported enthusiastic support [14]. Likewise, before the programme was implemented, an Islamic cleric visited families in Katsina State for several weeks to speak with them about the vaccine, and some families that had been hesitant to accept it did so as a result. Kenya also shows that when religious leaders actively promoted HPV vaccination, those in the congregation were significantly more likely to vaccinate their daughters [16].

These examples show not only the vital role of respected community members, but also the critical timing of their involvement. Leaders consulted with them before vaccination programmes

started and were allowed to ask questions, raise concerns, and understand the programme, becoming credible advocates within their communities. In contrast, leaders who were introduced at the delivery point seldom had as much influence. A similar trend was noticed while monitoring in Oyo State in 2024. Ward Focal Persons' pre-existing relationships with traditional and religious leaders were seen to create a more receptive community for programme activities.

Vaccination programmes have overlooked another important group: fathers. In a study in Kano State, Yusuf et al. found that fathers were 69% more likely (1.69; 95% CI 1.24–2.32) to be HPV vaccine-hesitant than mothers [6]. One possible reason is that women have more contact with health facilities and more opportunities to receive health education, as they are primarily responsible for childcare. The finding also reflects household decision-making dynamics. Programmes targeting mothers may not change the final vaccination decision if fathers have primary decision-making authority in the household. In Oyo State, during monitoring, some mothers said they wanted to get their daughters vaccinated, but that it would depend on their husbands.

Health communication and community engagement. Information alone will not close the divide between communities that receive information and communities that participate in HPV vaccination. A variety of interventions that offered opportunities to ask questions, voice concerns, and talk about vaccination in familiar settings generally performed better than those that delivered information [17].

On a national level, Nigeria's HPV vaccination programme is a good example. The first phase started in October 2023 in 16 States and Phase 2 in May 2024 in Oyo State and 20 other States. Vaccine campaigns that funded community mobilisers trusted in their communities tended to have higher acceptance rates. Kubura et al. found that culturally sensitive approaches, well-trained health care providers, and micro-plans based on local realities were key to implementation success. At the same time, misinformation about infertility remained a persistent problem [7]. In both phases, over 12 million girls have been immunised with the HPV vaccine [18]. Learning from other African experiences in this area highlights the need for trust and long-term community engagement. In Rwanda, which introduced a national HPV vaccination programme in 2011,

strong political support, community health workers embedded in local communities, and an established health system with high public trust achieved high coverage of two doses of HPV vaccines [19]. In Tanzania, community health workers, continuous quality improvement, strong political support, and ongoing engagement with communities and stakeholders supported achievement of more than 90% coverage of two doses of HPV vaccines by 2023. However, findings in Uganda showed that geographical access was not enough. In one community, only 47% of people were immunised, even though the community had a nearby health facility, suggesting that social and relational factors were more likely to be a problem than physical ones [21]. Together, these findings indicate that successful HPV vaccination programmes require continued community engagement before, during, and after implementation, in addition to vaccine availability and health system capacity. A multi-faceted approach to communication, culturally relevant communication, and community partnerships, not just short-term campaign activities, builds trust.

Tables 1 and 2 present summaries of the major themes identified from the literature reviewed

and their practical implications, and the principal studies included in the review, study design, key findings and contribution to understanding community trust in HPV vaccine uptake, respectively. Figure 1 summarises the important relationships that emerged from the literature reviewed in a conceptual framework.

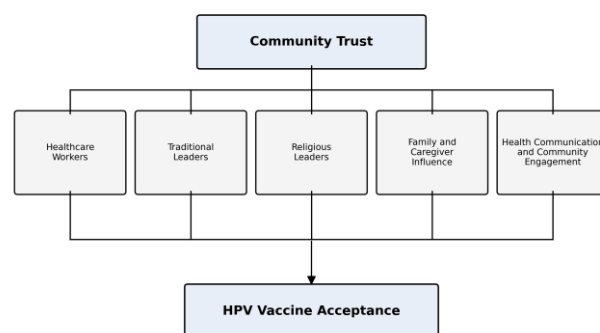


Figure 1 – Proposed conceptual framework illustrating the role of community trust and HPV vaccine acceptance across sub-Saharan Africa

Table 2 summarises the principal studies included in this review.

Table 2 – Summary of Included Studies

Resurces	Country	Study Design	Main Finding	Trust Theme
[6]	Nigeria	Cross-sectional (n=1,071)	Low awareness and high hesitancy: only 4.2% had heard of HPV; 32.7% would still decline vaccination even if it were free; fathers showed 69% higher odds of hesitancy than mothers.	Knowledge deficits; gender dynamics; healthcare worker role
[7]	Nigeria (9 states)	Qualitative	Misinformation about sterility was the central challenge; campaigns that used cultural sensitivity and trained health workers performed better.	Misinformation; community engagement; traditional leadership
[8]	Nigeria	Cross-sectional	Caregivers exposed to HPV messaging had a 27 percentage point higher vaccination rate (68.2% vs 41.3%).	Health communication; digital engagement
[20]	Tanzania	Mixed-methods	Tanzania reached over 90% two-dose HPV coverage by 2023 through community stakeholder engagement and sustained subnational support.	Community engagement; health systems trust
[10]	Kenya	Qualitative	Trust in health workers and communication quality were the two factors most closely linked to HPV vaccine acceptance.	Healthcare worker trust; communication quality
[21]	Uganda	Community-based	HPV coverage in a community with a nearby facility was only 47%; conflicting information and limited knowledge, not distance, drove low uptake.	Health literacy; community trust
[9]	Malawi	Qualitative (FGDs)	Limited knowledge about cervical cancer and misconceptions about the vaccine were the	Knowledge deficits; misinformation

Resurces	Country	Study Design	Main Finding	Trust Theme
			main reasons caregivers declined; overall willingness to vaccinate was low.	
[16]	Kenya	Cross-sectional	Congregants of religious leaders who endorsed HPV vaccination were significantly more likely to vaccinate their daughters.	Religious leadership; institutional trust
[19]	Rwanda	Policy analysis	Rwanda's early success with HPV vaccination reflected strong political commitment, community accountability, and sustained stakeholder engagement from programme design onwards.	Political commitment; community mobilisation
[4]	Sub-Saharan Africa	Systematic review (20 studies)	Misinformation and low health literacy are the barriers cited most often in the literature; both are amplified in settings where institutional trust is already weak.	Knowledge; misinformation; institutional trust
[17]	Global (SSA focus)	Commentary	Participatory community engagement strengthens public confidence in vaccination programmes and is especially important where institutional trust is fragile.	Community engagement; trust-building
[23]	Africa	Quantitative survey	Countries with higher levels of institutional mistrust showed lower childhood vaccination coverage across the continent.	Institutional trust; government credibility
[12]	Global	Review	Trust in a specific health worker predicts vaccine uptake more consistently than generalised trust in the health system.	Healthcare worker trust
[22]	Global	Conceptual framework	The 3C model identifies confidence, meaning trust in vaccines and the systems delivering them, as the primary modifiable determinant of vaccine hesitancy.	Vaccine confidence; trust framework

The factors associated with HPV vaccine acceptance in sub-Saharan Africa, as outlined in Tables 1 and 2, are not independent; they work together. When trust in health institutions is low, misinformation is more likely to spread. Recommendations from healthcare workers carry greater impact when within the context of recognised relationships of trust. Engaging traditional and religious leaders as partners in programme planning and implementation is more effective than adding them to the programme at the time of vaccine delivery. Overall, these results indicate that community trust is the key mechanism through which many known barriers to HPV vaccine uptake operate. How trust affects vaccination choices differs across contexts, but the overall structure is very similar. In Nigeria, informal social networks have been a problem for health systems, as they rely on institutional mistrust and misinformation to perpetuate themselves [7,8]. In Kenya, interactions between caregivers and healthcare workers seem to have a more immediate effect on vaccine acceptance [16]. In Tanzania and Uganda, factors beyond the campaign itself (rather than the campaign itself) explain vaccine hesitancy better than social trust or general

factors. In Tanzania and Uganda, social trust predicts vaccine hesitancy better than campaign-specific factors. These contextual differences have important implications for programme design. What works in one context doesn't necessarily work in another. However, these findings consistently link higher trust in the people and institutions providing vaccination services to increased acceptance of vaccination, compared with communities that lack this trust [5,23].

It is also important to recognise trust as a process, not a definitive quality of a community. It is built through repeated positive interactions before, during, and after immunisation campaigns. The more communities have had positive interactions with a health system over time, the more likely they are to engage positively in future vaccination programmes, compared with communities that have had limited interactions with a health system or distrustful interactions. This is why programmes that concentrate on vaccine delivery and nothing else tend to start from scratch each time with community confidence.

These findings have implications not just for individual behaviour change, but also for many other

areas. Trust is essential for evidence-based vaccination programmes to be effective, and it is not a programme communication task or objective, but an integral part of programme implementation. Programmes that strengthen the foundations for good vaccine uptake before a vaccination campaign starts are not just improving uptake during that one campaign; they are building a better platform for the next vaccination campaign. As such, the community mobiliser, with several weeks spent interacting with local communities before vaccine arrival, is not just doing outreach but also contributing to the vaccine implementation infrastructure that supports ongoing vaccine uptake.

This is confirmed by reflective observations from Independent Monitoring activities during HPV vaccination Phase 2 in Nigeria, which took place in the rural areas of Oyo State in 2024. Those who were sceptical of vaccine teams generally responded differently when trusted community leaders engaged them in the same discussion across multiple settlements. The literature reviewed recommended this 'sequential' method of involving community leaders when it was not enough to achieve community communication. Most importantly, it implies that no one actor or institution can create trust alone. Instead, trust builds through relationships and is reinforced by collaboration among healthcare employees, community leaders, and the community itself.

Expanding the evidence base: more country and programmatic evidence

Evidence from South Africa's long-term school-based programme enriches the proposed trust framework. Although overall national coverage has been >80% since 2014, district-level variation remains significant. In eThekweni District in Kwa-Zulu-Natal, only 40% of caregivers accept the programme, with awareness of the programme, confidence in vaccine safety, and endorsement by religious leaders as the strongest independent indicators of acceptance [24]. Trust-building and education cannot be treated as single "campaign" events, as results from a separate cohort of the first HPV-vaccine recipients in the earlier VACCS trials revealed that sociodemographic characteristics and understanding of the risk of cervical cancer remained significant determinants of vaccine-related knowledge several years after vaccination [25]. The findings confirm the trend seen in Nigeria and Kenya: programme trust, not

vaccine availability, distinguishes high- and low-coverage districts within the same country.

Ghana illustrates the intersection of national policy prioritisation and community trust. Although HPV vaccination was largely supported by the majority of stakeholders in the 2025 policy analysis (which included a national survey), which reported that 76.6% of the public knew about HPV, there was low political prioritisation and a lack of coordination in resource allocation, which delayed the country's first nationwide HPV vaccination programme from 2024 to October 2025 [26]. This case shows that communities can build trust before the programme begins, and that if policy implementation does not consolidate that trust before the programme starts, communities are likely to lose trust when it is delivered.

Another dimension of the picture is the demand side: Ethiopia's experience. An analysis of a nationally representative survey of eligible school-girls conducted in 2023 revealed that approximately 31% had been vaccinated with HPV; prior use of sexual and reproductive health services was a strong predictor of HPV vaccination uptake [31]. Multi-channel community messaging was the intervention, and caregiver and adolescent awareness increased significantly in the Somali region intervention districts compared with the matched control districts; this shows that community messaging can build trust and awareness not only through spontaneous relationships but through structured intervention [32]. A pattern of knowledge gaps leading to mistrust was also found in two related complementary mixed-methods studies carried out in Jimma Town, where almost a quarter of school girls surveyed reported that they were unsure of the side effects of the vaccine, and fewer than one in three parents said they had heard about it [33].

Zambia's programme shows similar dynamics, but from a different perspective. Other studies revealed low acceptability of HPV vaccination among mothers in Ndola District at 61.8% [35], largely due to HPV-specific knowledge, occupation and household factors. In Lusaka, attitudes among adolescent girls were generally positive to the vaccine, with structural barriers noted, including obtaining parental consent or being in school to receive the vaccine [36]. Building on these, a nominal group-technique study with adolescents, parents, teachers and health workers paved the way for what communities can do to improve uptake by involving community members,

sensitisation, mass media and the involvement of patients, relatives and their families as the most feasible and accepted strategies by the communities themselves [37].

The centrality of trusted relationships is also demonstrated in The Gambia, Nigeria and Cameroon. Qualitative results from interviews with caregivers in The Gambia indicated that trust in the vaccination programme was the main factor shaping caregiver decisions, rather than concerns specific to adolescent girls, regardless of the child's age or sex [38]. The pre-implementation study conducted in Abia State, Nigeria, also found that demographic factors were not the most influential factors influencing parental acceptance in the context of the state-level HPV vaccine rollout; rather, exposure to accurate vaccine information was [39]. The same community-trust network was identified as key drivers of uptake across this review and in Cameroon, a national survey of health workers found that parents and traditional authorities, religious leaders, and teachers were the actors most likely to drive uptake, following the country's 2023 transition to a single-dose schedule with no gender restrictions. The strength of the association between parental education, household income, and awareness and acceptability of HPV vaccination, however, was variable across countries; a systematic review and meta-analysis of 26 studies across the region similarly confirmed that parental education and household income are consistently associated with awareness and acceptability of HPV vaccination, though the level of association varied significantly by country [27, 40]. This evidence complements the qualitative findings in Table 1: socioeconomic constraints are not stand-alone determinants of trust, but also affect whether caregivers can access trusted sources of health information. Recent population-level programme impact evidence supports sustainable trust-building. A follow-up cross-sectional study in South Africa of the country's HPV school-based programme reported that the prevalence of HPV vaccine-preventable HPV 16 and 18 infections among adolescent girls who were eligible for immunisation was reduced by 83%. At the same time, reductions were comparable for girls living with HIV, who are at significantly higher risk of cervical cancer [34]. This finding matters for the community trust framework outlined in this review because it shows that high, sustained coverage rates associated with community trust deliver tangible disease prevention even in a high-HIV-burden context, giving

community programmes a clear, evidence-based message to share with less-compliant providers and community members.

The COVID-19 pandemic offered an unexpected opportunity to assess how quickly positive progress can be erased when programmes are interrupted. A multi-country cohort analysis revealed that HPV vaccination coverage in the region dropped from >80% in 2014 to as low as 3% in 2022 – in part due to pandemic-related school closures which impacted school-based HPV vaccine delivery [28]. School closures also affected community engagement and myth-busting activities, as schools are important places where community trust is built, and programme infrastructure is provided. Schools are also key vaccine delivery points, meaning programme infrastructure and community trust are not distinct.

Two recent policy developments directly affect this proposed trust-centred framework. First, the recommendation of the World Health Organisation (WHO) in December 2022 to allow single-dose HPV vaccine scheduling streamlines delivery of HPV vaccines, as there will be fewer contacts between health services and families, which may diminish the practical burden that undermines trust when asking families to return for multiple doses [29]. Beyond community engagement strategies, these two developments hint at the influence of programme design choices on the context in which community trust can be fostered and maintained: the shift to include boys in HPV vaccination further signals benefits for equity; and the emerging discussion of gender-neutral vaccination raises additional equity concerns that can either increase or complicate the building of community trust depending on how this change is communicated.

CONCLUSIONS

Findings on HPV vaccine hesitancy in sub-Saharan Africa are consistent. However, communities may reject vaccination despite vaccine availability, adequate health-facility staffing, and well-funded vaccination campaigns. The barrier may not be the vaccine, but rather the relationship or lack of it, between the community and the health system that asks the community to trust in the vaccine. This review identified three key elements in building vaccine confidence: healthcare workers, traditional and religious leaders, and ongoing community engagement. At the same time,

misinformation, historical distrust, lack of awareness, and socioeconomic factors remained ongoing obstacles to vaccine uptake. These factors don't work in isolation. Instead, they communicate through the shared medium of community trust and should be viewed as strengthening trust as a pillar of effective HPV vaccination programmes. Expanding vaccine supply and improving service delivery are not enough to improve HPV vaccine coverage. It takes ongoing investment in relationships, meaningful community engagement, and communication approaches that build trust before, during, and between vaccination campaigns. These investments can take longer to affect coverage than infrastructure or more vaccine supplies, but they are vital to high and sustained vaccine uptake. Future studies should prospectively validate communities' trust-building strategies, tracking how well they promote vaccination uptake and how long they persist over multiple rounds. Alongside access to effective vaccines, communities need to trust the people and institutions delivering them, which will be crucial to the success of HPV vaccination programmes in sub-Saharan Africa.

The evidence reviewed indicates that building community trust must not be restricted to community sensitisation but should be part of HPV vaccination programmes. Planning, funding, and delivery of community engagement should span the programme cycle, not just precede vaccine delivery. During programme planning, involve

traditional, religious, and other key community members; provide accurate information; and give them opportunities to ask questions before asking them to advocate for vaccination. Healthcare personnel should be trained not only in vaccine delivery but also in interpersonal communication, including listening to concerns, addressing misinformation, and building rapport with caregivers. When fathers or male heads of households make key healthcare decisions, communication should target them, not just mothers or female caregivers. Programmes should also be active between vaccination campaigns, building on the trust gained during these campaigns rather than rebuilding it each time. Programme implementation should also include regular monitoring and evaluation of community engagement strategies. This would help programme(s) understand the effects of trust, community participation, and communication activities on vaccine uptake over time, respond to challenges as they arise, and adjust future implementation strategies accordingly. The results emphasise the need for prospective implementation studies that test trust-building interventions across multiple rounds of vaccination. Current evidence is largely cross-sectional and retrospective, which limits understanding of how trust is built and maintained over time. Longitudinal and mixed-methods studies would provide stronger evidence on the strategies needed not only to increase HPV vaccine uptake, but also to sustain high uptake over the long term.

REFERENCES

1. World Health Organisation. (2026, July 3). *Cervical cancer*. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/cervical-cancer>
2. International Agency for Research on Cancer. (2024). Cancer today: Nigeria. Retrieved from <https://gco.iarc.who.int/media/globocan/factsheets/populations/566-nigeria-fact-sheet.pdf>
3. World Health Organisation. (2020, November 17). Global strategy to accelerate the elimination of cervical cancer as a public health problem. Retrieved from <https://www.who.int/publications/i/item/9789240014107>
4. Kutz, J.-M., Rausche, P., Gheit, T., Puradiredja, D. I., & Fusco, D. (2023). Barriers and facilitators of HPV vaccination in sub-saharan Africa: a systematic review. *BMC Public Health*, 23(1). doi: 10.1186/s12889-023-15842-1
5. Acheampong, T., Akorsikumah, E. A., Osae-Kwapong, J., Khalid, M., Appiah, A., & Amuasi, J. H. (2021). Examining Vaccine Hesitancy in Sub-Saharan Africa: A Survey of the Knowledge and Attitudes among Adults to Receive COVID-19 Vaccines in Ghana. *Vaccines*, 9(8), 814. doi: 10.3390/vaccines9080814
6. Yusuf, K. K., Olorunsaiye, C. Z., Gadanya, M. A., Ouedraogo, S., Abdullahi, A. A., & Salihu, H. M. (2024). HPV vaccine hesitancy among parents and caregivers of adolescents in Northern Nigeria. *Vaccine: X*, 21, 100591. doi: 10.1016/j.jvacx.2024.100591

7. Kubura, D., Sampson, S., Erekosima, G., Dauda, M., Atobatele, S., Oni, M., Samuel, O., Ngobua, S., Akpen, C., Popoola, G., Okoh, C., Mukhtar, A.-M., Nnaji, K., Nzeribe, E., Ukoh, H., Agunbiade, I., Mohammed, F., & Okagbue, H. (2025). Stakeholders' perspectives on lessons learnt from HPV mass vaccination in Nigeria. *BMC Public Health*, 25(1). doi: [10.1186/s12889-025-24418-0](https://doi.org/10.1186/s12889-025-24418-0)
8. Agha, S., & Nsofor, I. (2025). HPV vaccine uptake among adolescent girls in Nigeria: The complex role of caregivers' education. *PLOS One*, 20(7), e0325684. doi: [10.1371/journal.pone.0325684](https://doi.org/10.1371/journal.pone.0325684)
9. Bwanali, A. N., Liundi, P., Lubanga, A. F., Mpinganjira, S. L., & Gadama, L. A. (2024). Caregiver acceptance of human papillomavirus vaccine for their female children in Chileka, Blantyre, Malawi. *Vaccine: X*, 20, 100557. doi: [10.1016/j.jvacx.2024.100557](https://doi.org/10.1016/j.jvacx.2024.100557)
10. Ochomo, E. O., Tonui, P., Muthoka, K., Amboka, S., Itsura, P., Omenge Orang'o, E., Rosen, B., Loehrer, P., & Cu-Uvin, S. (2024). Addressing HPV vaccine hesitancy: unveiling concerns and building trust' perspectives of adolescent girls and parents in Kisumu County, Kenya. *Ecancermedicalscience*, 18. doi: [10.3332/ecancer.2024.1735](https://doi.org/10.3332/ecancer.2024.1735)
11. Deignan, C., Swartz, A., Cooper, S., & Colvin, C. J. (2021). Stakeholders' Understandings of Human Papillomavirus (HPV) Vaccination in Sub-Saharan Africa: A Rapid Qualitative Systematic Review. *Vaccines*, 9(5), 496. doi: [10.3390/vaccines9050496](https://doi.org/10.3390/vaccines9050496)
12. Paterson, P., Meurice, F., Stanberry, L. R., Glismann, S., Rosenthal, S. L., & Larson, H. J. (2016). Vaccine hesitancy and healthcare providers. *Vaccine*, 34(52), 6700–6706. doi: [10.1016/j.vaccine.2016.10.042](https://doi.org/10.1016/j.vaccine.2016.10.042)
13. WHO Regional Office for Africa. (2024, September 9). *Government, partners and northern traditional leaders reaffirm commitment to Nigeria's immunisation and health services goals*. Retrieved from <https://www.afro.who.int/countries/nigeria/news/government-partners-and-northern-traditional-leaders-reaffirm-commitment-nigerias-immunisation-and>
14. Bolaji, A. (2024, June 11). *Nigeria's Kwara State rolls out HPV vaccine to enthusiastic reception*. Retrieved from <https://www.gavi.org/vaccineswork/kwara-state-rolls-out-hpv-vaccine-enthusiastic-reception>
15. Adupong, R. (2025, March 11). *The Nigerian cleric on a mission to protect girls from cervical cancer*. Retrieved from <https://www.gavi.org/vaccineswork/clerics-mission-protect-girls-northern-nigeria-cervical-cancer>
16. Okenyori, D. S., Kaaria, F., Odhiambo, F. B., Murugi, L., Matoke, V. O., Salima, R., Anyika, D., Ogutu, G., & Musau, A. (2024). Religious leaders' willingness to promote the uptake of human papillomavirus vaccine among their congregants in Mavoko Sub-County, Machakos County, Kenya. *The Pan African Medical Journal*, 48. doi: [10.11604/pamj.2024.48.141.43492](https://doi.org/10.11604/pamj.2024.48.141.43492)
17. Burgess, R. A., Osborne, R. H., Yongabi, K. A., Greenhalgh, T., Gurdasani, D., Kang, G., Falade, A. G., Odone, A., Busse, R., Martin-Moreno, J. M., Reicher, S., & McKee, M. (2021). The COVID-19 vaccines rush: participatory community engagement matters more than ever. *The Lancet*, 397(10268), 8–10. doi: [10.1016/s0140-6736\(20\)32642-8](https://doi.org/10.1016/s0140-6736(20)32642-8)
18. UNICEF. (2024, September 19). *Generations unite in Nigeria's HPV vaccine campaign*. Retrieved from <https://www.unicef.org/stories/generations-unite-nigerias-hpv-vaccine-campaign>
19. Asempah, E., & Wiktorowicz, M. E. (2023). Understanding HPV Vaccination Policymaking in Rwanda: A Case of Health Prioritization and Public-Private-Partnership in a Low-Resource Setting. *International Journal of Environmental Research and Public Health*, 20(21), 6998. doi: [10.3390/ijerph20216998](https://doi.org/10.3390/ijerph20216998)
20. Carlton, J. G., Pamba, D., Ryan, N., Olomi, W., Ntinginya, N. E., Tinuga, F., Maganga, L., William, W., Lwilla, A., Kapesa, E., Mwakisile, J., Magesa, D., Mbunda, A., Grund, J. M., McCormick, L. J., Hyde, T., & Casey, R. (2025). Facilitators and barriers to implementation of HPV vaccination in Tanzania: a mixed-methods study exploring perspectives from national, subnational, and community stakeholders, 2018–2023. *Vaccine*, 62, 127560. doi: [10.1016/j.vaccine.2025.127560](https://doi.org/10.1016/j.vaccine.2025.127560)

21. Tuhebwe, D., Adyedo, C., Ahumuza, E., Ssendagire, S., & Wanyenze, R. K. (2024). Improving HPV vaccine acceptance through peer-to-peer education among adolescent girls in the urban poor settings of Kisenyi, Kampala, Uganda. *PLOS Global Public Health*, 4(12), e0004007. doi: [10.1371/journal.pgph.0004007](https://doi.org/10.1371/journal.pgph.0004007)
22. MacDonald, N. E. (2015). Vaccine hesitancy: Definition, scope and determinants. *Vaccine*, 33(34), 4161–4164. doi: [10.1016/j.vaccine.2015.04.036](https://doi.org/10.1016/j.vaccine.2015.04.036)
23. Stoop, N., Hirvonen, K., & Maystadt, J.-F. (2021). Institutional mistrust and child vaccination coverage in Africa. *BMJ Global Health*, 6(4), e004595. doi: [10.1136/bmjgh-2020-004595](https://doi.org/10.1136/bmjgh-2020-004595)
24. Bhengu, P., Wiysonge, C. S., Katoto, P. D. M. C., Ndwandwe, D., Cooper, S., Bhengu, S., Mazingisa, A. V., Saber, T., Sithole, M., Smith, D., Tembe, L. G., Kuodi, P., & Shey, M. S. (2025). Factors Associated with Acceptance of Vaccination Against Human Papillomavirus in eThekweni District of South Africa. *Vaccines*, 13(7), 732. doi: [10.3390/vaccines13070732](https://doi.org/10.3390/vaccines13070732)
25. Adams, R. A., Visser, C., Dreyer, G., Snyman, L., van der Merwe, F. H., & Botha, M. H. (2024). Sociodemographics, behaviour and knowledge of first South African HPV-vaccine recipients. *South African Family Practice*, 66(1). doi: [10.4102/safp.v66i1.5913](https://doi.org/10.4102/safp.v66i1.5913)
26. Asempah, E., Ikpebe, E., Wyndham-West, M., & Wiktorowicz, M. E. (2025). Challenges and Opportunities for Cervical Cancer Prevention Through HPV Vaccination in Ghana: A Public Health Policy Analysis. *Cancer Control*, 32. doi: [10.1177/10732748251383280](https://doi.org/10.1177/10732748251383280)
27. John, A., Abbah, A. P., & Sandøy, I. F. (2025). Associations of socioeconomic factors with parents' awareness and acceptability of HPV vaccination in sub-Saharan Africa - a systematic review and meta-analysis. *BMC Public Health*, 25(1). doi: [10.1186/s12889-025-24550-x](https://doi.org/10.1186/s12889-025-24550-x)
28. Adeyanju, G. C., Essoh, T.-A., Sidibe, A. R., Kyesi, F., & Aina, M. (2024). Human Papillomavirus Vaccination Acceleration and Introduction in Sub-Saharan Africa: A Multi-Country Cohort Analysis. *Vaccines*, 12(5), 489. doi: [10.3390/vaccines12050489](https://doi.org/10.3390/vaccines12050489)
29. World Health Organization. (2022). [Human papillomavirus vaccines: WHO position paper, December 2022](#). *Weekly Epidemiological Record*, 97(50), 645–672.
30. Scheepers, V. C., & Jillian. (2025). Expanding the case for gender-neutral human papillomavirus vaccination in South Africa: Emerging neonatal and ethical considerations. *African Journal of Primary Health Care & Family Medicine*, 17(1). doi: [10.4102/phcfm.v17i1.5035](https://doi.org/10.4102/phcfm.v17i1.5035)
31. Azale, T., Alemayehu, T., Belay, H. T., Oot, L., Gebeyehu, A., Temesgen, Z., Tamir, T., Mulat, L., Ayalew, M., Bogale, M., & Wondwossen, L. (2026). Bridging the Gap: Disparities in HPV Vaccine Uptake Between In-School and Out-of-School Girls Following a Demand Generation Intervention in Ethiopia: A Cross-Sectional Study. *Vaccines*, 14(5), 405. doi: [10.3390/vaccines14050405](https://doi.org/10.3390/vaccines14050405)
32. Enyew, E. B., Kasaye, M. D., Kebede, S. D., Feyisa, M. S., Serbessa, N. G., Tebeje, T. M., & Tareke, A. A. (2025). Human Papillomavirus Vaccination uptake and associated factors among schools girls aged between 9–14 years in Ethiopia: Performance Monitoring for Action (PMA-ET) 2023, multilevel analysis. *PLOS One*, 20(6), e0325557. doi: [10.1371/journal.pone.0325557](https://doi.org/10.1371/journal.pone.0325557)
33. Dera, M., Wondimagegnehu, A., & Asfaw, Z. G. (2023). Determinants for hesitancy in human papillomavirus (HPV) vaccine uptake among school girls in Jimma Town, Ethiopia. A mixed approach: quantitative and qualitative. *Reproductive Health*, 20(1). doi: [10.1186/s12978-023-01711-y](https://doi.org/10.1186/s12978-023-01711-y)
34. Machalek, D. A., Nyemba, D. C., Travill, D., Petoumenos, K., Mbulawa, Z. Z. A., Naidoo, I., Motshwane, F. M. M., Bamford, L., Rees, H., Kaldor, J. M., Delany-Moretlwe, S., Chikandiwa, A., Makae, M., Mzimela, T., Mogodiri, T., Ndlovu, N., Mkwana, E., Munthali, R., Brotherton, J. M., et al. (2026). Population impact of South Africa's human papillomavirus (HPV) vaccination programme on HPV prevalence in adolescent girls with and without HIV: a repeat cross-sectional study. *The Lancet Global Health*, 14(4), e570–e578. doi: [10.1016/s2214-109x\(25\)00525-x](https://doi.org/10.1016/s2214-109x(25)00525-x)

35. Mwaba, D. K., Khondowe, S., Daka, V., Mwanza, P., Chisanga, C., Kalasa, H., & Nambozi, M. (2024). Human Papilloma Virus Vaccine Acceptability and Its Associated Factors among Mothers of Female Children 9-14 Years in Ndola District of Zambia. *Open Journal of Obstetrics and Gynecology*, 14(11), 1757–1774. doi: [10.4236/ojog.2024.1411145](https://doi.org/10.4236/ojog.2024.1411145)
36. Lubeya, M. K., Chibweshwa, C. J., Mwanahamuntu, M., Mukosha, M., Frank, S., & Kawonga, M. (2023). "When you get the HPV vaccine, it will prevent cervical cancer; it will act as a shield": adolescent girls' knowledge and perceptions regarding the human papillomavirus vaccine in Zambia. *Frontiers in Health Services*, 3. doi: [10.3389/frhs.2023.1208458](https://doi.org/10.3389/frhs.2023.1208458)
37. Lubeya, M. K., Mwanahamuntu, M., Chibweshwa, C. J., Mukosha, M., & Kawonga, M. (2024). Selecting and Tailoring Implementation Strategies to Improve Human Papillomavirus Vaccine Uptake in Zambia: A Nominal Group Technique Approach. *Vaccines*, 12(5), 542. doi: [10.3390/vaccines12050542](https://doi.org/10.3390/vaccines12050542)
38. Johm, P., Jallow, M. M., Manneh, E., & Clarke, E. (2025). Primary caregivers' acceptance of gendered human papillomavirus (HPV) vaccination across The Gambia. *Vaccine: X*, 27, 100755. doi: [10.1016/j.jvacx.2025.100755](https://doi.org/10.1016/j.jvacx.2025.100755)
39. Amuzie, C. I., Bassi, A. P., Fishman, E., Mekonnen, D., Rogers-Bloch, Q., Cappelier, K., LaMontagne, S., Kalu, K. U., Izuka, M., & Sunday, S. T. (2025). Parental acceptance of human papillomavirus vaccine for female adolescents in Abia State, southeastern Nigeria: a pre-implementation study. *Pan African Medical Journal*, 51. doi: [10.11604/pamj.2025.51.44.43317](https://doi.org/10.11604/pamj.2025.51.44.43317)
40. Njoh, A. A., Bolio, A., Venczel, L., Libwea, J. N., Waheed, D.-e.-N., Kongnyuy, E. J., Amani, A., Saidu, Y., Dinga, J. N., Ngege, B. M., Mbanga, C., Madaina, I., Abizou, M. B., & Cleenewerck de Kiev, L. (2026). Key players and determinants improving human papillomavirus vaccination coverage in Cameroon: a cross-sectional nationwide health workers survey. *Vaccine*, 69, 128006. doi: [10.1016/j.vaccine.2025.128006](https://doi.org/10.1016/j.vaccine.2025.128006)