

# Role of communication in improving human papillomavirus (HPV) vaccination among adolescents in sub-Saharan Africa: A systematic review

## KEY MESSAGES

1. Vaccine communication is a key step towards addressing vaccine hesitancy and improving uptake, to achieve the WHO target of 90% HPV vaccination coverage by 2030.
2. Community involvement ensures greater level of individual and collective ownership and ease of decision-making about the vaccine with better completion rates.
3. National immunization programs should incorporate communication tools that address specific factors that influence hesitancy in the target population, such as vaccine misunderstanding and poor knowledge on the relationship between HPV and cervical cancer.
4. The communication strategy applied should serve various purposes, including to educate and inform; teach skills; provide support; enable communication; remind or recall; and facilitate decision-making.
5. The communication should target a broad category of the population (the adolescent girls; community and religious leaders; parents, teachers and school boards; and government agencies).
6. Effective communication uses a combination of channels (media, face-to-face communication, use of IEC materials like brochures and flyers, and drama and dance) to enhance reach and impact.

## BACKGROUND

The global prevalence of cervical cancer stands at 569,847 new cases and 311,365 deaths with 88% incidence and mortality occurring in less developed regions [1]. In sub-Saharan Africa (SSA), about 100,000 women are annually diagnosed with cervical cancer [2].

Human papillomavirus (HPV) immunization is a key cervical cancer prevention strategy with most SSA countries at their nascent stages of national implementation.

There exists some gaps in the implementation majorly as a result of lack of awareness and knowledge on HPV,

cervical cancer and issues around vaccine safety [3–7]. Studies have found communication to significantly increase HPV vaccine awareness, knowledge and uptake [8].

In promoting HPV vaccination uptake, communication serves to educate and inform, remind or recall, enhance community ownership, use of teach skills, provide support, facilitate decision-making and enable exchange of information.

Table 1 provides more details on communication purposes.

**Table 1: Communication purposes in HPV vaccination promotion**

| Communication strategy type/purpose | Description   |
|-------------------------------------|---|
| <b>Inform and/or educate</b>        | Enable people to understand the meaning and relevance of vaccination to their health and the health of their family or community. Interventions may be tailored to particular populations and can also serve to address misinformation.   |
| <b>Enhance community ownership</b>  | Increase community participation and promote interaction between the community and health services. Interventions may build trust among consumers and generate awareness and understanding of vaccination. Interventions of this nature embrace community involvement in planning, program delivery, research, social mobilization, advocacy or governance. |
| <b>Teach Skills</b>                 | Focus on the acquisition of skills related to accessing vaccination services and communicating about vaccination. They also include interventions to train parents, communities and healthcare providers on how to communicate or provide vaccination-related education to others.  |
| <b>Provide support</b>              | Tailored to assist people in addressing specific challenges to vaccination that arise within their day-to-day lives.  |
| <b>Facilitate decision-making</b>   | Tailored to assist people in addressing specific challenges to vaccination that arise within their day-to-day lives.  |
| <b>Enable communication</b>         | Explicitly and purposefully aim to bridge a communication gap/ make communication possible with particular people or groups.  |
| <b>Remind or recall</b>             | Strategies to remind consumers of required vaccinations and to recall those who are overdue.  |

Communication strategies employed in vaccination promotion have a couple of components namely communication purpose, channels and targeted audience [9–11]. The communication channels include interpersonal communications through face-to-face or in groups; printed materials; emails; phone; web-based communication; school curriculum kits; community events; educational entertainment; community engagement and coalitions; decision aids which encourage active participation by providing options; and outcomes to patients that inform health care decision-making. This systematic review evaluated all communication interventions around HPV immunization in SSA.



## OBJECTIVE

Rapid evidence summary of the communication strategies employed to promote HPV vaccination among adolescents in SSA.

## METHODS

This was a systematic review (PROSPERO number CRD42021243683). The primary outcomes were HPV immunization uptake, acceptance, completion, knowledge and awareness.

### Targeted population/audience

- The adolescent girls since they are the target for immunization.
- The guardians and parents of adolescent girls since they are required to give consent for immunization of their daughters.
- The community and religious leaders who influence the collective community decisions.
- The teachers and educators who support the dissemination of the information.
- The healthcare workers who provide the vaccine and respond to any bodily reaction to the vaccine.
- The policymakers and government departments who are tasked with the role of formulating and implementing policies.

### Criteria

Our review yielded a total of 874 articles from both peer review databases (434 records) and grey literature (440 records). Of the 874 records, 870 records were screened after four duplicates were removed.

Following screening of abstract and titles, 42 articles were potentially included, of which 22 full text articles were found to be eligible for inclusion in the systematic review. 20 studies were excluded with reasons as elaborated in Figure 1 next.

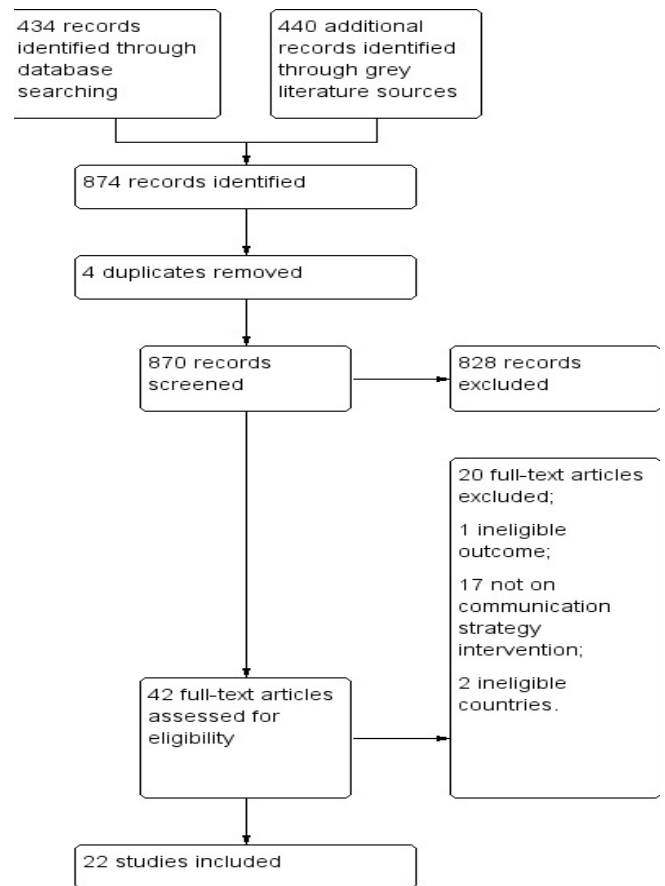


Figure 1: Flow diagram of the screening process

### Setting

The studies were conducted in various SSA countries which included; four from Nigeria; six from South Africa; three from Kenya; two from Uganda; and one from each of the countries of Cameroon, Mali, and Tanzania. Three studies were conducted across various countries classifying them as multi-country studies.

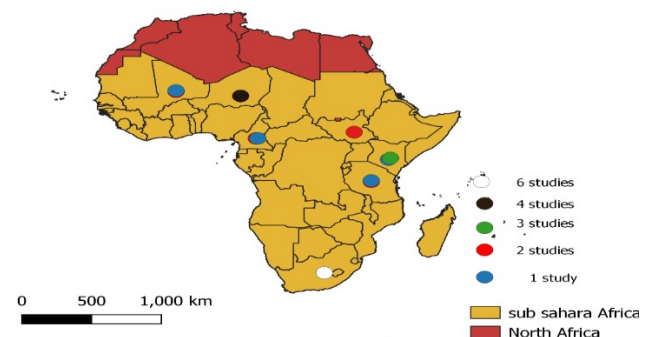
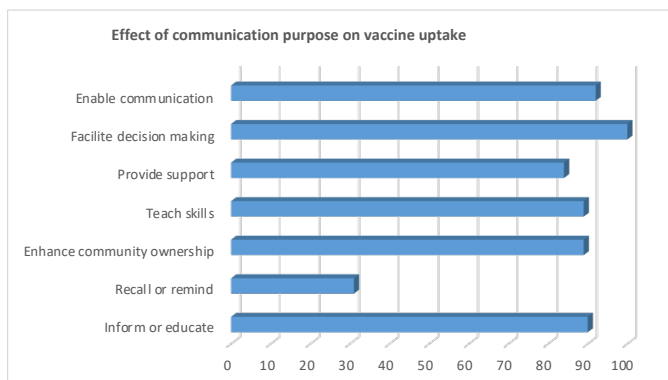


Figure 2: Proportion of included studies per country

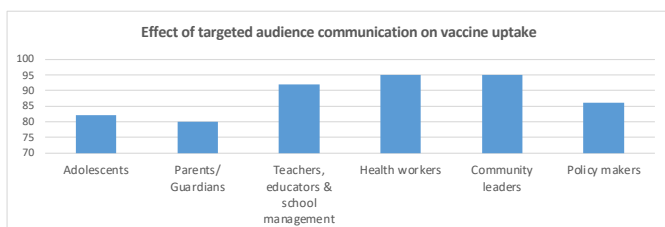
## RESULTS

### Effect of communication purpose on vaccine uptake



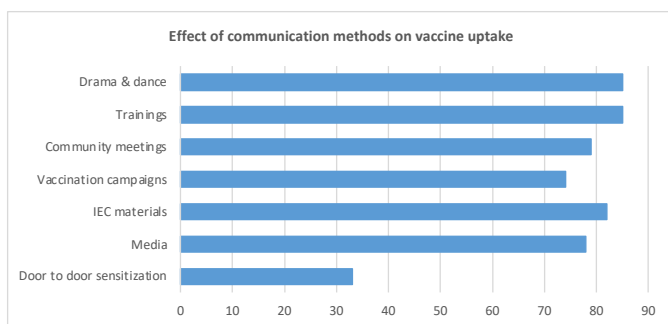
### Effect of targeted audience communication on vaccine uptake

Based on the population targeted with the communication intervention, the overall uptake achieved was 85% with studies involving both community leaders and healthcare workers in the communication achieving 95% uptake rates.



### Effect of communication methods on vaccine uptake

The use of drama and trainings achieved highest uptake at 85%.



## DISCUSSION

The communication interventions majorly focused on the strategies involving sharing of information and/or educating the population about HPV and the vaccine, facilitating decision-making about taking up the vaccine and achieving community ownership of the process.

Sharing information about the vaccine, targeting the various stakeholders and using channels that allow for interaction were effective strategies that can help realise the 90% target of immunization coverage set by the World Health Organization (WHO) to be achieved by 2030.

It is also important to target all the stakeholders involved in the care of the targeted adolescent girls and the girls themselves in order to achieve maximum vaccine uptake and completion rates. To achieve the WHO target of 90% coverage by 2030, the population to be targeted by the communication intervention need to be chosen carefully.

The sub-group analysis revealed that targeting community leaders, healthcare workers, teachers and school management boards yielded the best results [12]. This is due to the influence these groups of people have on the parents and targeted adolescent girls in the community and school. Similar findings were reported by two primary studies which noted the importance of involving healthcare workers, political leadership and all stakeholders in communication intervention [13].

## LESSONS LEARNT

- Utilizing community health volunteers (CHVs) is a promising strategy as they are valued source of information and mobilizers in the community. Also, use of community influencers is an important factor in a parent's vaccine decision-making for the child.
- Critical need to provide detailed information on vaccine benefits to prevent misinformation.

- Participatory training strategy that uses simple visual materials is an understandable language is an effective strategy.
- Extensive social mobilization is key in improving uptake with tailored promotional messages to the needs of various groups including the hard to reach populations.
- There were concerns around HPV vaccine messaging indicating targeting girls before their sexual debut would discourage eligible girls who had passed their sexual debut. Therefore, need for more expanded outreach programs to address misconception and inadequate information is important.
- Future programs to conform to local norms. Community based educational interventions that are specifically focused on gender and context to increase vaccination. Also, the messaging to include more information on the HPV vaccine safety and effectiveness.
- Information on HPV should target the hard to reach population and tailored to specific population.
- Use of mass media is an effective approach to disseminate information.

- More studies need to assess the adverse effects and the cost effectiveness of the intervention used.
- Future studies need to be harmonized in terms of the intervention, target population, reporting and the definition of vaccine completion either as two or three doses for uniformity of reporting and assessment of completion rates.

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## CONCLUSION

HPV vaccination communication is an essential intervention in the vaccine roll-out and implementation. Communication strategies improve immunization acceptance, knowledge and uptake. Some key lessons learnt are the need to include information on the vaccine safety and effectiveness in the messaging and targeted messaging for hard-to-reach populations.

## RECOMMENDATIONS

- More research from the SSA context is needed in order to give a clear definition of vaccine completion either as two or three doses for uniformity of reporting and assessment of completion rates.
- Communication to target all sections of the community and use a combination of delivery methods.

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