

Preparation for COVID-19 vaccines rollout: Interventions to increase trust, acceptability, and uptake in West African countries

Philip Teg-Nefaah Tabong  | Kwabena Opoku Mensah | Emmanuel Asampong

Department of Social and Behavioural Sciences, School of Public Health, College of Health Sciences, University of Ghana, Accra, Ghana

Correspondence

Philip Teg-Nefaah Tabong, Department of Social and Behavioural Sciences, School of Public Health, College of Health Sciences, University of Ghana, Box LG 13, Accra, Ghana.
Email: ptabong@ug.edu.gh

Abstract

Introduction: The approval of COVID-19 vaccines for use has come as a relief to West Africa and world. However, concerns raised about the vaccines in America and Europe have created anxiety among some citizens in Africa. These concerns are likely to affect the acceptance, and uptake of the COVID-19 vaccines in West Africa.

Methods: Guided by the principles of effective community engagement, this research reviewed typical case studies of past vaccination exercises to document concerns, challenges and lessons learnt. These were then used to propose pre-immunisation interventions in West Africa to increase the COVID-19 vaccines acceptance and uptake.

Results: Concerns about safety can undermine the rollout of the COVID-19 vaccines. These concerns can be addressed through effective community engagement. Community leaderships could be engaged through courtesy calls, workshops and durbars to sensitise them on immunisation. Engaging the scientific community can help build trust and reduce concerns about vaccine safety. In vaccines rollout, managing misinformation is important and the media can play a critical role in addressing these in their reportage. In addition, social media is an effective monitoring tool for vaccine-related misinformation.

Conclusion: The analysis underscores the need for more community engagement before the importation and deploy-

ment of COVID-19 vaccines in West Africa. Experiences from community responses to previous vaccination exercises for emerging and reemerging infectious diseases should inform the current efforts and enhance the process to achieve high uptake and reduce vaccine hesitancy.

KEYWORDS

acceptance, COVID-19, trust, uptake, vaccines, West Africa

Highlights

- Concerns about safety have often undermined the rollout of new vaccines
- High COVID-19 vaccine hesitancy has been reported across the world
- Effective local community engagement strategies can reduce vaccine hesitancy
- Social media is an effective monitoring tool for vaccine-related misinformation

1 | INTRODUCTION

As a step towards reducing the burden of the COVID-19, vaccines were developed and taken through clinical trial and approval for use. Some COVID-19 vaccines have already received approval and currently in-use in the United States and some European countries. Plans are far afoot to import these vaccines for use in West African countries. UNICEF is leading efforts to procure and supply COVID-19 vaccines as part of the global vaccine plan of the COVID-19 Vaccine Global Access Facility (COVAX Facility) led by Gavi, the Vaccine Alliance. However, it is important for certain interventions to be put in place before deployment of the vaccines to increase acceptance and uptake. Concerns about the efficacy and possible adverse effects of the vaccines in America and Europe are creating anxiety and mistrust among citizens in West Africa. Social media is already awash with concerns about the vaccines in some West African countries. This paper, therefore, provides guidance on some of the essential interventions required to build trust among various stakeholders for easy deployment of COVID-19 vaccination in West African countries.

2 | FORMATIVE RESEARCH TO INFORM READINESS AND CONCERNS ABOUT THE VACCINE

Formative research is the process by which researchers or public health practitioners define a community of interest, determine how to access that community, and describe the attributes of the community that are relevant to a specific public health issue. It is the basis for developing effective strategies, including communication channels, for influencing behaviour change. It helps researchers identify and understand the characteristics—interests, behaviours, and needs—of target populations that influence their decisions and actions.¹ Formative research can be used to make intervention programs both culturally and geographically appropriate. This is therefore indispensable as West African countries prepare to import the COVID-19 vaccines. Health-related behaviours have proven extremely difficult to change and are motivated by a variety of personal, cognitive, economic, social, cultural, and structural factors.²

Understanding such factors and the processes that can be employed to develop meaningful and effective interventions at multiple levels¹ are crucial for the success of any vaccine deployment.

The vaccines that have approved for use have clearly established an age range that is suitable for the various vaccines. Hence quantitative and qualitative studies should be conducted to document the knowledge and concerns of these target groups with respect to the vaccines. This would provide the evidence required to design appropriate behavioural change communication messages to improve uptake. As has been indicated, public health practitioners sometimes design very good interventions but become surprised when they do not achieve their goal mainly because of the failure to identify what the information needs and concerns of their target audience.³

3 | RISK COMMUNICATION AND COMMUNITY ENGAGEMENT BY HEALTH COMMUNICATORS

Risk Communication and Community Engagement (RCCE) is another important consideration that should be embedded in preparation for the deployment of COVID-19 vaccines. Governments in West Africa need to establish a health and risk communication office with experts to handle health and risk communication in public health emergencies and strategies to address the concerns of the population to avoid political undertone which can breed mistrust. COVID-19 vaccine-related information and risk are socially constructed and communicated to others through various platforms. The consequences of these communication efforts may lead to individual perceptions about the information and inform behavioural changes. RCCE is critical for national public health emergency response. One of the major lessons learnt during public health events of the 21st Century—including outbreaks of severe acute respiratory syndrome, Middle East respiratory syndrome, influenza A(H1N1), and Ebola—is that RCCE is integral to the success of responses to public health emergencies.⁴⁻⁶ Every public health emergency faces new communication challenges and can benefit from lessons learnt previously. The COVID-19 outbreak has and will continue to challenge public health systems and their ability to effectively communicate with their populations.⁷

4 | INTERNAL AND PARTNER COORDINATION AMONG INSTITUTIONS AND ORGANISATIONS IN READINESS FOR COVID-19 VACCINE

The preparation to rollout COVID-19 vaccines must be multi-disciplinary and multi-sectoral. Two principles in the Ottawa declaration on health promotion are critical in this direction; multi-sectoral and multi-strategies.⁸ Governments in West Africa must identify all Ministries and departments that have roles to play in the uptake of the COVID-19 immunisation and engage them as part of preparation. To successfully implement an immunisation schedule for COVID-19 goes beyond the Ministry of Health. Ministries and agencies such as education, chieftaincy and culture, transport, tourism, communication and information, health workers associations, market women associations, community-based groups, and non-governmental organisations need to be assigned specific roles in this regard. For example, Civil society organisations have expertise in community mobilisation for health education. These organisations are mostly located in rural and hard to reach parts of West Africa. They are therefore better positioned to provide health education and advocacy for acceptance of the vaccines among community members.

5 | PROVISION OF HEALTH EDUCATION ON RISK AND VACCINE

Even in the developed world with a high level of literacy, there have been challenges in acceptance of the COVID-19 vaccines. To contain these challenges, health workers and leaders of those countries were seen taking the vaccine on television to show that the vaccines are safe. In Africa, concerns are being raised about the safety of COVID-19

vaccines. These concerns underscore the need for intense health education on vaccine development and licencing prior to deployment. It is important for the countries to devise strategies to assure citizens that the same vaccines that were given to people in the developed countries are those that have been imported. These assurances should be given in a more transparent manner to build trust. It is important that health education is spearheaded by the scientific communities in those West African countries. Also, professional groups should lead these health education campaigns. Increasingly, citizens are beginning to have limited trust for politicians in Africa. It is often the belief that politicians in Africa take decisions to favour the Western World.⁹ The manifestation of this was widespread during the Ebola vaccine trial as well as the malaria vaccine trial and immunisation in some African countries.¹⁰ As noted by Viswanath¹¹ public health communication relies heavily on three principles—transparency, reliability, and trust. The breakdown of any of these principles creates room for misconception to flourish with potential negative consequences on the public health intervention.

Health education should highlight individual vulnerability using the appropriate channels and behavioural change communication strategies. The low COVID-19 case fatality rate in Africa appears to serve as a risk attenuator which may undermine efforts to ensure the majority of citizens are vaccinated to achieve herd immunity. As pointed out by Kasperson's social amplification of risk theory, individual level procession, and evaluation of risk may influence their behaviour and decision-making.¹² The framework explains that depending on the evaluation of the risk, it could affect trust and the acceptance of public interventions such as the decision to accept the COVID-19 vaccine or otherwise.

6 | COMMUNITY MOBILISATION AND ENTRY

Community mobilisation/community entry which is also very key to information dissemination and identification of possible socio-cultural practices were also neglected for past immunisation exercises for emerging infectious diseases such as Ebola virus disease (EVD). This would have helped in properly mapping out various stakeholders especially the traditional bodies including community leaders who understand their communities better in terms of values and norms.¹³ It is the responsibility of the government to liaise with the community leaders such as Chiefs, Imams, the Clergy and other religious leaders who our communities still respect and connect with to engage in the advocacy and education on the COVID-19 vaccine. The community leaderships could be engaged through courtesy calls, workshops and durbars to sensitise them on immunisation. These interactions could be used as platforms to appeal to them to assist in the mobilisation of their people using various traditional ways of information dissemination and community mobilisation.

This rapidly evolving COVID-19 pandemic is placing a devastating burden on health systems and health authorities and governments need to respond with effective, efficient, and culturally appropriate interventions which cannot be achieved without community involvement or engagement. Evidence shows that a perceived lack of consistency, competence, fairness, objectivity, empathy, or sincerity in crisis response in public health could lead to distrust and fear,¹⁴ especially when the people are not seen to be part of the process of implementation.

7 | ENGAGING THE SCIENTIFIC COMMUNITY

It is very essential to engage the scientific community to build trust before the introduction of the vaccine into the country. In Ghana, for example, the Ebola EVD vaccine trial (Adenovirus 26 vectored glycoprotein/MVA-BN [Ad26.ZEBOV/MVA-BN]) in Hohoe in the Volta region could not be conducted because of resistance from organised scientific institutions including the Ghana College of Arts and Science.⁹ Some of the scientific communities in West Africa include: Association of Schools of Public Health in Africa, Colleges of Science and Technology, Colleges of Physicians and Surgeons, Medical Associations, Biomedical Associations, Pharmaceutical Association, Nursing Associations and Social Sciences researchers. These organised scientific communities could be engaged to lead various

aspects of vaccines deployment. Their involvement would help build trust and transparency in the process to get the needed buy-in from the general public. Trustworthiness and transparency are considered key elements to ensuring the successful implementation of public health interventions including biomedical research to control public health emergencies.⁷ In engaging these associations, steps should be taken to address the widely held perception that the scientist community sometimes withhold critical information on vaccine development and adverse events. To overcome this challenge, the scientific community should be guided by available knowledge and should desist from making claims without concrete evidence. This is because COVID-19 is a disease with emerging variants for which some of the available vaccines are ineffective. The flood of COVID-19 vaccine-related information and making decisions without concrete evidence is an issue of global concern.¹⁵ This needs to be acknowledged to minimise vaccine hesitancy which has been widely reported across West Africa.¹⁶ Another challenge is the politicisation of some members of the scientific community in the response to COVID-19.¹⁷ This practice has resulted in the dissemination of conflicting information on the COVID-19 disease¹⁷ as well as vaccines among members of the scientific community with political affiliations. This was also evidenced in the 2014 EVD vaccine trial in Ghana which undermined the rollout.

This notwithstanding, one strategy of using the scientific community to build trust and increase the coverage of the COVID-19 immunisation exercise is to ensure that members of these groups receive the vaccine in the open. This would help address the misinformation about the vaccine. Prior studies have revealed the willingness of health workers to take the vaccines.^{18,19} African countries could leverage on this to increase uptake of the vaccine to achieve herd immunity.

8 | ENGAGING THE PRINT AND ELECTRONIC MEDIA FOR EFFECTIVE COMMUNICATION

Communication has been described as the process of conveying information, idea, or facts from one person to another, which helps to facilitate understanding of an issue.²⁰ Evidence shows that communication could yield positive or negative results based on how the message has been communicated and received, which also depends on other factors such as language, knowledge, understanding, and misconception.^{21,22} In recent times, the growth of media in Africa countries is unprecedented. The media has emerged as a very useful source of information broadcasting in various local languages. This medium can therefore be used to reach out to people located across the country. An analysis of the media content during the Ebola vaccine trial in African countries clearly shows that fear for the vaccine was accentuated by media reportage. About 33% of media reportage on the Ebola vaccine in four African countries: Sierra Leone, Ghana, Uganda, and Kenya claimed that the vaccine trials would cause an Ebola outbreak in those countries.⁹ This misinformation accentuated concerns about the vaccine and rejection in Ghana and other West African countries.

9 | ADDRESSING COVID-19 VACCINE-RELATED RUMOURS, MYTHS, AND MISCONCEPTIONS

Managing rumours is essential in preparation to rollout the COVID-19 vaccines in Africa. In the most recent past, there have been reports of people not participating in public health programs such as polio vaccination campaigns due to rumours that the vaccines contained infertility agents, or were used as a conduit to spread the human immunodeficiency virus.^{23,24} More recently in the Democratic Republic of Congo and Guinea, rumours that health workers were deliberately spreading the Ebola virus resulted in violence, civil unrest and targeted attacks on healthcare facilities, and the killing of healthcare workers.²⁵

There is therefore the need for governments in West Africa to establish a system for listening to public perceptions as well as detection of rumours and misinformation. This could be done by monitoring traditional and social

media, gathering feedback from healthcare workers and hotlines where necessary, establish systems for responding to rumours, misinformation, and frequently asked questions. It is important to address these rumours and misinformation because these rumours and misinformation create stress, fear, and panic which eventually lead to an increase in psychiatric symptoms and affect the mental health of the population.

As COVID-19 spreads, so are rumours, misinformation, and fake news, as such the role of the media must not be underestimated as stated earlier. The media must be involved and trained in the delivery of COVID-19 vaccine-related information and other news items on the outbreak in order to prevent misinformation. In addition, various avenues in information and risk communication such as videos, text, and voice must be employed. In general, the containment plan for Africa must involve an inter-sectoral approach to the fight against the outbreak. Sectors such as media, health system practitioners, and other relevant sectors including mental health, educational, finance, transport, gender, local government, traditional and religious leaders, local pharmaceutical companies must be involved.

10 | MANAGING SOCIAL MEDIA INFORMATION

The Internet, or more specifically the websites on the World Wide Web, is continuously changing because of technological developments. One of these information sources that has revolutionised the world is social media. More and more Internet users now spend lots of time on social media websites.²⁶ People use social media as an alternative source for evidence-based information on health.²⁷ These same social media could also be used to spread myths, misconceptions, and misinformation.²⁸ Recently, social media has been identified as a possible place to conduct rumour surveillance in public health which can hinder the uptake and impact of health intervention.^{29,30} Social media platforms provide an incredible opportunity to share information quickly across the globe but lack the proper safety measures that make sure the information being spread is accurate. Earlier studies by Kasperson show that risk events are interpreted and communicated by social actors such as institutional stakeholders and social media, and based on the interpretation people could increase or decrease trust in public health interventions¹² such as acceptance of the COVID-19 vaccine.

11 | CONCLUSION

The devastating effects of the COVID-19 require stringent measures to ensure that citizens in West African countries that are eligible to receive the vaccines are duly vaccinated to achieve herd immunity. Although vaccines are biological agents, acceptance has social implications. The experiences in western countries concerning the uptake of the vaccines underscore the need for proactive interventions before deployment of the COVID-19 vaccines in West African countries. Experiences from community responses to previous vaccination exercises for emerging and re-emerging infectious diseases should inform the current efforts and enhance the process to achieve high coverage and uptake.

ACKNOWLEDGEMENT

This authors wish to acknowledge all the research assistants for their support in the review of the case studies.

CONFLICT OF INTEREST

The authors declare no potential conflict of interest.

ETHICS STATEMENT

Not applicable.

AUTHOR CONTRIBUTIONS

Philip Teg-Nefaah Tabong: Conceptualization; Methodology; Data curation; Formal analysis; Software; Resources; Writing-original draft. **Kwabena Opoku-Mensah:** Conceptualization; Methodology; Resources; Validation; Writing-review & editing. **Emmanuel Asampong:** Conceptualization; Methodology; Resources; Validation; Writing-review & editing.

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

ORCID

Philip Teg-Nefaah Tabong  <https://orcid.org/0000-0001-9445-1643>

REFERENCES

- Gittelsohn J, Steckler A, Johnson CC, et al. Formative research in school and community-based health programs and studies: "State of the art" and the TAAG approach. *Health Educ Behav.* 2006;33(1):25-39. Published online. <https://doi.org/10.1177/1090198105282412>
- Bandura A. Social cognitive theory. In: *Handbook of Theories of Social Psychology*. 1. 2012:349-374. <https://doi.org/10.4135/9781446249215.n18>
- Smith RD. Formative research. In: Smith RD, ed. *Strategic Planning for Public Relations*; 2018;13:56-58. <https://doi.org/10.4324/9781315270876-2>
- World Health Organization. *Risk Communication and Community Engagement Preparedness and Readiness Framework: Ebola Response in the Democratic Republic of Congo in North Kivu*. Vol 2. 2018:13-25.
- Burnside-Lawry J, Carvalho L. Building local level engagement in disaster risk reduction: a Portuguese case study. *Disaster Prev Manag.* 2015;24:80-99. Published online. <https://doi.org/10.1108/DPM-07-2014-0129>
- Abrams EM, Greenhawt M. Risk communication during COVID-19. *J Allergy Clin Immunol Pract.* 2020;8:1791-1794. Published online. <https://doi.org/10.1016/j.jaip.2020.04.012>
- Agyepong IA. A systems view and lessons from the ongoing Ebola virus outbreak in West Africa. *Ghana Med J.* 2014;48(3):168-172.
- Potvin L, Jones CM. Twenty-five years after the Ottawa charter: the critical role of health promotion for public health. *Can J Public Health.* 2011;102:244-248. Published online. <https://doi.org/10.1007/bf03404041>
- Kummervold PE, Schulz WS, Smout E, Fernandez-Luque L, Larson HJ. Controversial Ebola vaccine trials in Ghana: a thematic analysis of critiques and rebuttals in digital news. *BMC Public Health.* 2017;17. Published online. <https://doi.org/10.1186/s12889-017-4618-8>
- Hogan AB, Winskill P, Ghani AC. Estimated impact of RTS,S/AS01 malaria vaccine allocation strategies in sub-Saharan Africa: a modelling study. *PLOS Med.* 2020;17(11):e1003377. <https://doi.org/10.1371/journal.pmed.1003377>
- Viswanath KV. *Applied Risk Communication for the 21st Century*. Harvard T.H. CHAN School of Public Health. Published 2020. Accessed September 19, 2020.
- Kasperson RE, Kasperson JX. The social amplification and attenuation of risk. *Ann Am Acad Polit Soc Sci.* 1996;545(1):95-105.
- Singer M. Pathogens gone wild? Medical anthropology and the "swine flu" pandemic. *Med Anthropol Cross Cult Stud Heal Illn.* 2009;28:199-206. Published online. <https://doi.org/10.1080/01459740903070451>
- Glik DC. Risk communication for public health emergencies. *Annu Rev Publ Health.* 2007;28:33-54. <https://doi.org/10.1146/annurev.publichealth.28.021406.144123>
- Correia T. The precariousness of political management of the SARS-CoV-2 pandemic in the search for scientific answers: calling for prudence in public health emergencies. *Int J Health Plan Manag.* 2021;2:1-5. Published online.
- Otu E, Osifo-Dawodu, Atuhebwe P, Agogo E, Ebenso B. Beyond vaccine hesitancy: time for Africa to expand vaccine manufacturing capacity amidst growing COVID-19 vaccine nationalism. *Lancet.* 2021;2.
- Tabong PT, Segtub M. Misconceptions, misinformation and politics of COVID-19 on social media: a multi-level analysis in Ghana. *Front Commun.* 2021;6:1-13. <https://doi.org/10.3389/fcomm.2021.613794>
- Agyekum MW, Afrifa-Anane GF, Kyei-Arthur F, Addo B. Acceptability of COVID-19 vaccination among health care workers in Ghana. *Adv Public Health.* 2021;2021:1-8. <https://doi.org/10.1155/2021/9998176>
- Chew NWS, Cheong C, Kong G, et al. An Asia-Pacific study on healthcare workers' perceptions of, and willingness to receive, the COVID-19 vaccination. *Int J Infect Dis.* 2021;106:52-60. <https://doi.org/10.1016/j.ijid.2021.03.069>
- Bennett P, Calman K, Curtis S, Fischbacher-Smith D. *Risk communication and public health.* 2010;1:25-28. <https://doi.org/10.1093/acprof:oso/9780199562848.001.0001>

21. Rice RE, Atkin CK. *Public communication campaigns*. 2017;2:1-9. <https://doi.org/10.4135/9781544308449>
22. Kreuter MW, McClure SM. The role of culture in health communication. *Annu Rev Publ Health*. 2004;25:439-455. Published online. <https://doi.org/10.1146/annurev.publhealth.25.101802.123000>
23. Petryna A. Ethical variability: drug development and globalizing clinical trials. *Am Ethnol*. 2005;32(2):183-197. Published online. <https://doi.org/10.1525/ae.2005.32.2.183>
24. Okonta PI. Adolescent sexual and reproductive health in the Niger Delta region of Nigeria--issues and challenges. *Afr J Reprod Health*. 2007;11(1):113-124.
25. Samb S. *Eight Bodies Found after Attack on Guinea Ebola Education Team*. Reuter; 2014.
26. Kaplan A, Mazurek G. Social media. In: *Handbook of Media Management and Economics*. 2nd ed. 2018;2:86-88. <https://doi.org/10.4324/9781315189918>
27. Kass-Hout TA, Alhinnawi H. Social media in public health. *Br Med Bull*. 2013;108:5-24. Published online. <https://doi.org/10.1093/bmb/ldt028>
28. Moorhead SA, Hazlett DE, Harrison L, Carroll JK, Irwin A, Hoving C. A new dimension of health care: systematic review of the uses, benefits, and limitations of social media for health communication. *J Med Internet Res*. 2013;15:e85. Published online. <https://doi.org/10.2196/jmir.1933>
29. Fung I-H, Tse Z, Fu K-W. The use of social media in public health surveillance. *West Pac Surveill Response J*. 2015;6(2):3-6.
30. Joshi A, Sparks R, Karimi S, et al. Automated monitoring of tweets for early detection of the 2014 Ebola epidemic. *PLoS One*. 2020;15:e0230322. Published online. <https://doi.org/10.1371/journal.pone.0230322>

How to cite this article: Tabong PT-N, Opoku Mensah K, Asampong E. Preparation for COVID-19 vaccines rollout: interventions to increase trust, acceptability, and uptake in West African countries. *Int J Health Plann Mgmt*. 2022;37(3):1221-1228. <https://doi.org/10.1002/hpm.3426>