

Culturally relevant COVID-19 vaccine acceptance strategies in sub-Saharan Africa



In sub-Saharan Africa, the reasons for low rates of COVID-19 vaccination and unwillingness to accept the vaccine vary, so country-specific solutions are needed.¹ Public health action that is humane, culturally relevant, and recognises the contribution of historical, structural, and other system dynamics has been called for.² To meet these objectives, countries should frame their individual remedial strategies on the basis of approaches that WHO and the *Lancet* Commission on the future of health in sub-Saharan Africa advocate for generating positive health behaviours.^{3,4} Central concepts of proven value that are relevant to COVID-19 vaccination uptake include innovation and task shifting away from conventionally relied upon forms of health informatics and engagement to promote health literacy and achieve health equity through action.

Although vaccination rates have risen in sub-Saharan Africa, vaccine resistance is a health-related behaviour,⁵ and challenges to vaccine acceptance remain.^{1,6} Consequently, as vaccine global supply and distribution inequities are overcome, countries must identify what individual factors different sectors of society see as compelling reasons for and against being vaccinated and find new ways to engage individuals who are undecided. As WHO and others have identified, innovative approaches need to be sought that build trust and engage at-risk populations,^{1,7} remediate insensitivity and reliance on so-called top-down directives, and promote strategies that are based on culturally-sensitive dialogue and mutual respect.^{1,2} Six WHO and *Lancet* Commission approaches encompass these criteria and are directly applicable to strategies to remediate COVID-19 vaccine resistance, as follows.

Community empowerment is needed to effectively engage all sections of society during the COVID-19 pandemic.^{1,7} Campaigns that inform, consult, involve, collaborate, and empower can engage stakeholders in subpopulations who are at particular risk or have specific concerns.^{1,7} Fears about vaccine safety are commonplace.^{4,6} Second-order ramifications of the pandemic (increased poverty, malnutrition, and sexual and gender-related violence) impact many

communities.⁷ The health-care community warrants a particular focus.⁶ A November, 2021, WHO survey across 25 African countries identified that only 27% of health workers were fully vaccinated, compared with 80% in 22 high-income countries; intended vaccine uptake in health workers was also low. Countries should share their solutions to issues with vaccine uptake.

People-centred strategies improve low public confidence.^{5,6} Governments must identify trust-enhancing triggers and use creative strategies to counter social media and internet-generated misinformation that is undermining vaccine acceptance¹ and, in parallel, reinforce the obvious—not everything read online is true or reliable, and someone trusted should be asked to explain facts that are not understood. Practical training in social listening and use of role play empowers caregivers to respond in a non-judgmental manner to misinformation and vaccine concerns.^{6,8}

Innovative education can address inequitable distribution of knowledge and promote understanding.^{7,9} Health promotion messages tailored to resonate with specific subpopulations can be created from data provided by the Africa Centres for Disease Control and Prevention, WHO, and national evidence-based resources. Delivery by non-traditional messengers can be more effective among young people, religious organisations, and traditional societies.^{1,8,10}

Novel and improved tools could build vaccine literacy and enhance uptake.^{1,5,6} Media and music videos produced with health-promoting themes increase knowledge, create favourable attitudes, and change behaviours.¹⁰ Bobi Wine's *Everyone* raised awareness around preventable maternal deaths in Uganda, and his *Corona Virus Alert* showed people how their actions can help fight the virus. Fear of needles deters many people from being vaccinated.^{5,6} Simple tools that provide an alternative focus during vaccination could help—eg, hand holding and verbal reassurance or teaching individuals how to consciously focus on each breath. Technology being explored includes cryodesiccation—freeze-dried COVID-19 vaccines would make storage and distribution easier.

Published Online
June 9, 2022
[https://doi.org/10.1016/S2214-109X\(22\)00251-0](https://doi.org/10.1016/S2214-109X(22)00251-0)

Training personnel to respond to local needs can empower women and enable more people to benefit from vaccination.⁹ Sometimes, such strategies require interventions that focus on men to strengthen male engagement and increase support for women's decision making. Valuable lessons were learned in programmes to prevent mother-to-child transmission of HIV, in which male partner endorsement was required. Personnel trained to lead men's groups can allay health-related fears and misconceptions through discussions in a safe single-gender environment. In some locales, church leaders should be included, as religious influence impacts vaccine-related behaviour.^{6,8} Training to promote partnerships that blend the best of traditional and western medicine has merit.

Non-traditional avenues endorse and facilitate vaccination.⁵ Influential personalities effectively champion vaccination where mistrust exists in conventional authority figures.^{1,6} Television and radio broadcast coverage of sporting events, cellphone providers, and social media can include public health service messages to raise awareness. Village health teams have unique potential as advocates in COVID-19-related campaigns, being trusted community members who are trained to respond to health priorities.⁶ Rural areas often do not have access to vaccination outlets. Drones can now deliver vaccines, and non-traditional venues, such as pharmacies and schools, can expand access to vaccination services.^{1,7} Vaccine production is not traditional in Africa, but manufacturing capacity is needed.

We declare no competing interests. We thank the Stellenbosch Institute for Advanced Study (STIAS) for convening the Summer School to build a network of young scientists in sub-Saharan Africa and increase research capacity in the Developmental Origins of Health and Disease. We also thank the DSI-NRF Centre of Excellence in Human Development at the University of Witwatersrand, who jointly provided financial support with STIAS to enable participants to attend the Summer School.

Copyright © 2022 The Author(s). Published by Elsevier Ltd. This is an Open Access article under the CC BY-NC-ND 4.0 license.

*Olufunke Ajeigbe, Getachew Arage, Michael Besong, Winnie Chacha, Rachana Desai, Phidelia Doegah, Twaambo E Hamoonga, Hawawu Hussein, Andrew Matchado, Sthembele Mbotwe-Sibanda, Gudani Mukoma, Adeyinka Odebode, Tolulope Olawole, Merling Phaswana, Oluwakemi Rotimi, Takana Mary Silubonde, Nomsa Thabethe, Anza Thiba, Nicholas Ekow Thomford, Frederick Wekesah, *Andrew Macnab, on behalf of The Stellenbosch Institute for Advanced Study African Scholars Network*
ajmacnab@gmail.com

Elizade University, Ilara-Mokin, Nigeria (OA); Debre Tabor University, Debre Tabor, Ethiopia (GA); University of Yaoundé 1, Yaoundé, Cameroon (MB); Jomo Kenyatta University of Agriculture and Technology, Juja, Kenya (WC); DSI/NRF Centre of Excellence in Human Development (RD), Developmental Pathways for Health Research Unit (GM), School of Therapeutic Sciences, Faculty of Health Sciences (MP), and Department of Surgery, Faculty of Health Sciences (AT), University of the Witwatersrand, Johannesburg, South Africa; University of Health and Allied Sciences, Ho, Ghana (PD); University of Zambia, Lusaka, Zambia (TEH); Tamale Technical University, Tamale, Ghana (HH); Kamuzu University of Health Sciences, Blantyre, Malawi (AM); University of KwaZulu-Natal, Durban, South Africa (SM-S); Kampala International University, Kampala, Uganda (AO); Covenant University, Ota, Nigeria (TO, OR); North West University, Potchefstroom, South Africa (TMS); University of South Africa, Pretoria, Africa (NT); University of Cape Coast, Cape Coast, Ghana (NET); African Population and Health Research Center, Nairobi, Kenya (FW); Stellenbosch Institute for Advanced Study, 7600 Stellenbosch, South Africa (AM)

- 1 Lazarus JV, Ratzan SC, Palayew A, et al. A global survey of potential acceptance of a COVID-19 vaccine. *Nat Med* 2021; **27**: 225–28.
- 2 Mutombo PN, Fallah MP, Munodawafa D, et al. COVID-19 vaccine hesitancy in Africa: a call to action. *Lancet Glob Health* 2022; **10**: e320–21.
- 3 Marmot M, Friel S, Bell R, Houweling TA, Taylor S. Closing the gap in a generation: health equity through action on the social determinants of health. *Lancet* 2008; **372**: 1661–69.
- 4 Agyepong IA, Sewankambo N, Binagwaho A, et al. The path to longer and healthier lives for all Africans by 2030: the Lancet Commission on the future of health in sub-Saharan Africa. *Lancet* 2017; **390**: 2803–59.
- 5 Afolabi AA, Ilesanmi OS. Addressing COVID-19 vaccine hesitancy: lessons from the role of community participation in previous vaccination programs. *Health Promot Perspect* 2021; **11**: 434–37.
- 6 Dzinamarira T, Nachipo B, Phiri B, Musuka G. COVID-19 vaccine roll-out in South Africa and Zimbabwe: urgent need to address community preparedness, fears and hesitancy. *Vaccines (Basel)* 2021; **9**: 250.
- 7 Dubé E, Laberge C, Guay M, Bramadat P, Roy R, Bettinger J. Vaccine hesitancy: an overview. *Hum Vaccin Immunother* 2013; **9**: 1763–73.
- 8 Gilmore B, Ndejjo R, Tchetchia A, et al. Community engagement for COVID-19 prevention and control: a rapid evidence synthesis. *BMJ Glob Health* 2020; **5**: e003188.
- 9 Acheampong T, Akorsikumah EA, Osae-Kwapong J, Khalid M, Appiah A, Amuasij JH. Examining vaccine hesitancy in Sub-Saharan Africa: a survey of the knowledge and attitudes among adults to receive COVID-19 vaccines in Ghana. *Vaccines (Basel)* 2021; **9**: 814.
- 10 Macnab AJ, Mukisa R. Celebrity endorsed music videos: innovation to foster youth health promotion. *Health Promot Int* 2019; **34**: 716–25.