RESEARCH SNAPSHOT

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Reaching refugees during the COVID-19 pandemic

Exploring innovative approaches to collecting COVID-19 symptom and exposure data and sharing public health information with displaced populations in remote locations.

IVR could be a useful tool in future outbreaks

The “Dial-COVID” telephone tool enabled collection and dissemination of COVID-19 information among refugee populations in Uganda. Interactive Voice Response (IVR) surveys with pre-recorded messages in nine languages overcame language and literacy barriers, did not require smartphone or internet access, and eliminated the need for in-person interaction. Its effectiveness at reaching previously hard-to-reach groups and adaptability may make IVR an appealing method for dynamic public health emergencies or outbreaks that require a rapid response.

Participant calling in to Dial-COVID from a refugee settlement. Credit: Study team

Background

There has been limited screening of refugee populations for COVID-19 symptoms and exposures and little data exists regarding knowledge and risk perceptions, ability to adhere to preventive measures, and vaccine willingness/hesitancy for this population. Telephone-based IVR technology, in which participants respond to recorded audio questions by entering numbers on the keypad, may be an effective means to rapidly collect and share information in a humanitarian setting.

How the research was conducted

Dial-COVID was advertised in refugee settlements across Uganda for participants to call into toll-free. Participants received an IVR survey screening for COVID-19 symptoms/exposures and public health messages. A subset of participants were invited for COVID-19 testing, longitudinal surveys and qualitative interviews.

Key findings

- Dial-COVID showed high acceptability/uptake. During 15,436 calls, participants including a high proportion of refugees and people with limited education, interacted with the platform in all nine languages.
- Severe muscle pain and unusual fatigue were associated with a positive COVID-19 test after controlling for demographic characteristics. Heterogeneity of symptoms between COVID-19 variants challenged the development of a predictive algorithm based on the symptom survey.
- Only ~60% of surveyed call-in participants were willing to accept a free COVID-19 vaccine with acceptance decreasing over time among participants < 35 years old.
- Participants were willing to protect themselves and their families from contracting COVID-19, but resource scarcity, high housing density and necessity to leave the home to attend to survival needs influenced adoption of recommended prevention strategies.
- The COVID-19 pandemic and related policies negatively impacted income generation, food security, and social interactions in refugee settlements. Incidents of child marriage and teenage pregnancies were reported following school closures.

Implications for humanitarian practitioners and policymakers

- IVR platforms can be used to rapidly collect and disseminate information in many languages and in difficult to reach places. The Dial-COVID tool effectively reaches refugees and groups with limited education that may be excluded when using traditional dissemination methods.
- The limited infrastructure required and adaptability make IVR an appealing method for dynamic public health emergencies that require a rapid response. As the number of languages for which translation and recording is required increases, this flexibility decreases.
- The Dial-COVID tool, or similar approaches, hold potential to be deployed for other applications such as routine surveillance as well as during future outbreaks of other transmissible diseases.

Recommendations for future research

Future research should focus on the optimization of IVR implementation by identifying strategies that facilitate uptake. Differences in uptake across refugee settlements should be explored and digital literacy and phone access should be assessed to identify population subgroups that may not be reached by this intervention.

About the study team

The Dial-COVID study was designed and conducted by the Dial-COVID research consortium, a collaboration consisting of partners in academia (the University of Washington, Makerere University Infectious Diseases Institute, Harvard Humanitarian Initiative), a non-governmental organization (Medical Teams International), and a telecommunication company (Viamo), all with extensive experience in Uganda.

Implementation was supported by Medical Teams International Village Health Teams, lay community health workers who promoted and facilitated uptake of Dial-COVID in refugee settlements.

The Principal Investigator was Kelli O'Laughlin, MD, MPH (University of Washington) and the Site Principal Investigator was Timothy Muwonge, MbChB, MPH (Makerere University).

Keywords

Refugees; interactive voice response; COVID-19; humanitarian context; mixed-methods; vaccination hesitancy; IVR

Articles and further reading

Articles and other outputs can be found on the project page at Elrha's website: https://www.elrha.org/project/dial-covid-telephone-symptom-surveillance-refugees-uganda/

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http://www.elrha.org/programme/research-for-health-in-humanitarian-crises/