Social Science in Humanitarian Action

Practical Approaches

Social Science Research for Vaccine Deployment in Epidemic Outbreaks

A girl receives a measles vaccination in Leauvaa Village, as part of a UNICEF-supported National Vaccination Campaign in response to the 2019 measles outbreak in the Pacific region.

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Recent infectious disease outbreaks show that inadequate consideration of social, cultural, political, and religious factors in humanitarian responses has consequences for community acceptance of, and the effectiveness of, response activities. A growing number of studies have focused on the historical, social, cultural, and political determinants of vaccine acceptance, and highlighted the specificities of these dynamics during emergencies. Given the range of disease types and contexts, there is a need to understand different perspectives on vaccines and outbreaks, including: political and economic factors that determine whether and how vaccines can be effectively deployed in an emergency; health system realities closely tied to cultural, policy, and historical developments; and local systems of knowledge to identify community perceptions surrounding vaccine use.

This SSHAP Practical Approaches brief can be used by health-care providers/ non-governmental organisations (NGOs), national and global-level policymakers, and industry actors to gain social science inputs in vaccine deployment efforts to provide practical solutions to re-occurring challenges, including vaccine refusal.

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Why social science is vital for effective vaccine trials

Whilst there are challenges to general vaccine deployment and administration in resource-scarce settings, these are enhanced during disease outbreaks due to increased logistical challenges for health systems, which can hamper infection containment. In recent years, numerous events have revealed lack of confidence in vaccines for cholera, polio, Zika, human papillomavirus (HPV), Ebola virus disease (EVD), and measles, mumps and rubella (MMR) as a result of mistrust in vaccine providers, or because of rumours and poor communication. It is therefore crucial to understand what happens with vaccine deployment and administration during an outbreak from both a social and operational perspective.

Anthropological research during the West African 2014-16 Ebola epidemic revealed that approaches to vaccine deployment that ignored social and religious factors negatively impacted response efforts. Response workers' lack of understanding of funeral practices, for example, built barriers between health workers and local communities, fuelled fears and mistrust that hampered dialogue, and compromised on risk-reduction efforts. Further studies revealed issues of power, fairness, and trust surrounding the recruitment of participants into Ebola vaccine trials, related to political and cultural concerns (Enira *et al.* 2015). Other work revealed that, whilst the trial was set up in an environment embedded with fear, rumours, and mistrust, participants' motivations to take part in the trial were based on altruism, sacrifice, curiosity, and hope about the vaccine (Tengbeh *et al.* 2018).

A number of studies on vaccine acceptability in resource-poor contexts show that vaccine acceptability is multifaceted. Often vaccine unacceptability has been attributed to a lack of information and poor understanding of risk. Social science research has identified issues of trust and legitimacy, and how acceptance of vaccination reflects social relationships, culture, and values. Social scientists have also offered a more nuanced understanding of acceptability of vaccines than either confidence or hesitancy. For example, they have explored community knowledge of vaccines at the interface between animal and human health from the perspective of trust, and found that negative experiences with veterinary vaccines could affect perceptions of human vaccine efficacies. Issues of trust have also been explored in relation to Zika, which linked these to concerns about MMR vaccines.

Question modules

Social science methods that explore contextual factors important to vaccine deployment and community perceptions of the vaccine are varied. They can answer questions in different ways to address the complex web of factors that affect patients' decisions to get vaccinated.

This tool comprises four modules that provide practical steps to better integrate social science inputs in vaccine deployment efforts. Using a mixed methods approach ensures broader insights into the complex web of factors that determine a country's ability to deploy vaccines during an outbreak and patients' acceptability of vaccination, both routine and in the event of outbreak.

Module 1: Qualitative interviews and focus group discussions (FGDs)

Structured interviews are based on a set of questions, usually asked in the same order and the same way to all subjects. The main objective is for interviewers to obtain comparable information from a (potentially large) number of subjects. Whether this is in regard to attitudes and concerns towards vaccination, experiences of ongoing or previous vaccine trials, or to gather knowledge of health-seeking behaviours, interviews provide detailed insight into how those who are at the receiving end of vaccine deployment programmes interpret and understand their application. In a group setting, FGDs facilitate a similar learning experience, and are useful to understand group dynamics.

Interviews can also be used for rapid data collection on subjects such as health-seeking behaviours. Researchers may seek to understand who members of the community turn to for health advice when symptoms associated with emerging infectious disease develop, allowing public health teams to identify which health professionals or alternative health-care providers they need to engage with.

'Free listing' and 'rank ordering' can be used to determine health-seeking behaviours of participants during interviews or FGDs. During 'free listing' exercises, participants are asked to list as many places/people/sources as they can think of regarding where they can access vaccines or health advice/treatment should they develop symptoms of a specific disease. Participants are then asked to create hierarchies of who they turn to first and why.

With this information, researchers map hierarchies of social actors that inform patient knowledge of vaccination ('rank ordering'). This provides an understanding of the symptoms participants feel they can manage on a self-led/self-referral basis, and researchers can then map sources of vaccines/treatment.

The topics covered may be sensitive and asking these questions could arouse strong emotion and/or concern around intention. This means that rapport-building, honesty, mutual respect, and reinforcing trust is vital before, during, and after the collection of this information. Recommended steps:

- Give your name and where you are from, and thank them for welcoming you to the community.
- Explain why you are there, your job, and why you want to talk with them specifically.
- Offer reassurance that you will keep their personal information private and invite them to feel comfortable with you.
- Allow them to refrain from answering certain questions if they do not feel comfortable. However, if this happens, it provides information in itself by indicating the particular sensitivity of the topic.
- Ask if they have any questions and be willing to answer questions about why you are there.
- Be honest – if you don't know, you don't know and that is okay.
- Inform them of the next steps and follow-up.

Identifying the proper community entry channels and going through trusted leadership is crucial. Convenient meeting times and places should be agreed with community members (e.g. not during a feast day or celebration).

The collection of 'life histories' is a common social science tool that allows researchers to gain insight into possible reasons for hesitations towards vaccine use in specific communities. Engaging with community members' life experiences provides an opportunity to unravel lengthy histories of fear, hesitation, or misinformation. Understanding how and where this comes from may highlight possible reasons why response teams are met with resistance. In turn, this information can assist with providing direction for teams responsible for building trust with communities in times of vaccine deployment.

Module 2: Social media analysis

Systematically reviewing and analysing social media can be useful to gather views and expectations of health-care system preparedness and response for meeting challenges in vaccine deployment. It also shows how concerns and fears are shared within and across communities. Twitter analysis, for example, can showcase discussions around perception of vaccines in trials and deployment programmes. Coding tweets using specific themes can provide information on rumours, misinformation, and general attitudes towards vaccines being tested (Vanderslott *et al.* forthcoming).

Module 3: Ethnographic methods

Participant observation is a widely used methodology in many disciplines, particularly in anthropology. Its aim is to gain a close and intimate familiarity with a given group of individuals (e.g. a religious, occupational, or subcultural group, or a community) and their practices through an intensive involvement with people in their natural environment, usually over an extended period of time. Prior to, during, or after a disease outbreak, observations of patients within vaccine trials, returning home after treatment or observing communities' interactions with preparedness activities can provide detailed and unique perspectives into social behaviours, which can inform health workers on attitudes to vaccination and response staff (Tengbeh et al. 2018).

Module 4: Community consultations and involvement in decision-making

Community members should be informed and engaged prior to, during, and following data collection activities, and during vaccine deployment efforts. Community members are 'engaged' when they play a meaningful role in the deliberations, discussions, decision-making, and/or implementation of projects or programmes affecting them. Researchers should therefore work closely with those engaged in communicating with affected populations, and establish a good rapport and mutual respect within communities to better develop trust. Community engagement activities should not be viewed solely as a dissemination activity, but rather an integral part of the design of vaccine studies/deployment programmes and as a means to monitor community attitudes/experiences during outbreaks (Dada *et al.* 2019).

Further reading

Enria, L. *et al.* (2016) 'Power, Fairness and Trust: Understanding and Engaging with Vaccine Trial Participants and Communities in the Setting Up the EBOVAC-Salone Vaccine Trial in Sierra Leone', *BMC Public Health* 16.1: 1140

Tengbeh, A.F. *et al.* (2018)'"We Are the Heroes Because We Are Ready to Die for This Country": Participants' Decision-Making and Grounded Ethics in an Ebola Vaccine Clinical Trial', *Social Science and Medicine* 203: 35–42

Vanderslott, S. *et al.* (Under Review) 'How Can Community Engagement in Health Research be Strengthened for Infectious Disease Outbreaks in Sub-Saharan Africa? A Scoping Review of the Literature', *BMC Public Health*

Venables, E. and Pellecchia, U. (2017) 'Engaging Anthropology in an Ebola Outbreak: Case Studies from West Africa', *Anthropology in Action* 24.2: 1–8

Yaqub, O.; Castle-Clarke, S.; Sevdalis, N. and Chataway, J. (2014) 'Attitudes to Vaccination: A Critical Review', *Social Science and Medicine* 112: 1–11

About

The Social Science in Humanitarian Action Platform (SSHAP) aims to establish networks of social scientists with regional and subject expertise to rapidly provide insight, analysis and advice, tailored to demand and in accessible forms, to better design and implement emergency responses. SSHAP is a partnership between the Institute of Development Studies (IDS), the London School of Hygiene and Tropical Medicine (LSHTM), Anthrologica and UNICEF Communication for Development (C4D).

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Credits

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