Opinion

Promoting risk communication and community engagement during Mpox outbreak in fragile conflict zones of Eastern DRC

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A R T I C L E   I N F O

A B S T R A C T

The Democratic Republic of the Congo (DRC) declared a national outbreak of monkeypox (Mpox) in December 2022, and in February 2023, an incident management system was implemented. As of May 26, 2024, the DRC had recorded 7851 cases of Mpox, with 384 fatalities. The number of confirmed cases in the province has been increasing. Of all cases, 117 (36 %) were individuals living in camps for Internally Displaced People (IDP) in North and South Kivu provinces. These provinces are currently considered as foci of the outbreak.

The challenges of this outbreak in Eastern DRC, where there exist high levels of general insecurity, distrust of government and foreign actors, and ongoing violence, have contributed to widespread community resistance to potentially lifesaving interventions. The complex relationship between armed conflict and public health highlights the need for a One Health approach to address both short-term and long-term health challenges in conflict-affected regions. Armed conflict often disrupts healthcare systems, making it difficult for people to access diagnosis, treatment, and prevention services, thus leading to increased disease transmission and severe outcomes. An effective Risk Communication and Community Engagement (RCCE) strategy is the bedrock to addressing these specific needs of people in conflict zones and improving their acceptability of health interventions. A One Health approach integrating RCCE would empower communities to manage risks, identify outbreaks and avoid infected animals, improving community acceptability to public health interventions. In the delicate war zones of the DRC, conveying emergency concerns related to Mpox is a worry in terms of preserving and fostering trust in the government. This paper seeks to highlight the need for urgent intervention by the local and global public health communities to work together to put stronger policies and long-term plans into place that prioritize building a resilient healthcare system, encouraging risk communication, and engaging the community in order to combat the Mpox outbreak in the Eastern DRC fragile conflict zones.

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1. Understanding the Risk Communication and Community Engagement (RCCE) during a Mpox outbreak in fragile conflict zones of Eastern DRC

The Democratic Republic of the Congo (DRC) declared a national outbreak of monkey pox (Mpox) in December 2022 [1]. Monkey pox virus is zoonotic, but human-to-human transmission occurs when an infected individual comes into close contact with another person [2]. Since February 2023, a management system has been put in place in DRC due to the rising number of infections that are being reported. A total of 7851 cases of Mpox was documented in the DRC as of May 26, 2024, with 384 fatalities. In 22 of the 26 provinces, 177 out of the 519 (34 %) health zones had reports of cases [1] Figs. 1, 2.

The Mpox outbreak has continued to spread within South Kivu province. More recently, Mpox has spread to the neighbouring North Kivu province. The first case in North Kivu was confirmed on 1 June 2024, in the Karisimbi Health Zone in the city of Goma [1–3]. The situation in the DRC is complex, with more than 100 armed groups operating in the eastern part of the country. This is an unsettled region, where conflict has raged for decades. Conflict is escalating, especially in recent months and after COVID-19 and Ebola outbreaks. Amidst this conflict, as of 28th September 2024, the test positivity rate of 29 % has been confirmed from the 1108 suspected mpox cases in North Kivu and that the number was increasing daily. Of positive cases, 117 (36 %) were individuals living in camps for Internally Displaced People (IDP) [3]. The emergence of a new clade of the Mpox virus, known as Clade Ib, has raised alarm due to its rapid transmission and the challenges in containing it amidst ongoing instability [4].

Armed conflicts and civil unrest contribute to the spread of infectious disease through disruption of disease control programs and the breakdown of the healthcare system. In the Central Republic Africa, for example, armed conflicts have restricted patient access to antiretroviral therapy and caused the temporary evacuation of healthcare workers. In Uganda, the introduction of Ebola was possibly caused by the movement of displaced people seeking refuge due to the violence in Eastern DRC, violence that was centralized around politics, armed groups, land ownership, and economics [5,6]. Studies show that an increase in the number of cases had been observed repeatedly due to conflict conditions [5]. War and violence against healthcare workers in the DRC has also been suggested to have contributed to an increase in the transmission of pneumonic plague, river blindness, sleeping sickness and Ebola in the country [5,6]. When a disease emerges in a war zone, it exacerbates hurdles to control the outbreak as community opposition and lack of personal security put pressure on control measures and education. The eastern region of the DRC, already struggling with a disrupted health system land an ongoing armed rebellion, is in the throes of a medical emergency of Mpox [3,4].

Mpox, a zoonotic disease, highlights the direct consequences of human interaction with animals and the environment [8]. The potential for reverse zoonosis, in which humans transmit the virus back to animals poses significant risks and this could significantly complicate efforts to control the outbreak and present ongoing challenges for both public health and animal health [8].

A Risk Communication and Community Engagement (RCCE)

Fig. 1. Geographic distribution of clade Ia and Ib MPXV in the Democratic Republic of the Congo, by province, from 1 October 2023 to 29 December6 2024.
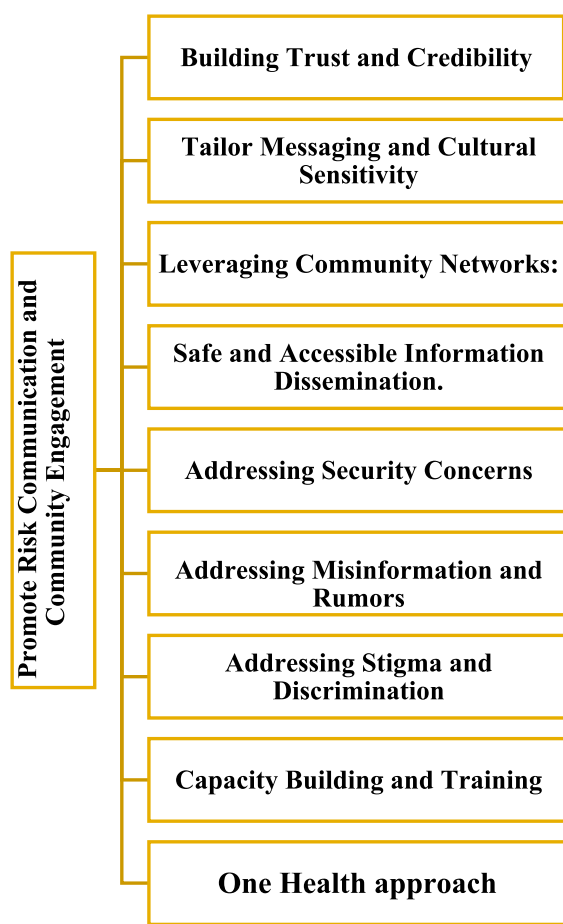
Fig. 2. Interventions to Promote Risk Communication and Community Engagement During Mpox Outbreak Eastern DRC.

framework was developed during the Ebola Response in the Democratic Republic of Congo in North Kivu in 2018 to address outbreak of that disease. According to the WHO, Risk Communication is the 'real-time' exchange of information between authorities and people at risk of a threat or hazard. Community Engagement involves establishing at risk communities as equal partners in addressing the hazard or threat. RCCE is quintessentially a One Health solution [14].

In the case of the 2018 Ebola response in DRC, the use of RCCE prevented further amplification of Ebola infections by systematically accumulating informed social science knowledge of the communities to shape a response. Authorities actively engaged with the key stakeholders such as community influencers, health care workers and local communities. The community was at the time, and continues to be, a direct victim of the violent conflicts in DRC. RCCE served critical roles in reducing the consequences of the conflicts, by monitoring and working to improve the public health of populations impacted by wars and disease outbreaks [6–9].

Given the 2022 Mpox outbreaks in the DRC and other African nations, it is obvious that a concerted, global One Health response is required to address the onset and spread of illness to save lives. While there is a steady increase in understanding of the One Health concept, in order to stop future outbreaks, responses must be mobilized and coordinated across government and non-government agencies. The Mpox outbreak is a stark reminder that health challenges cannot be tackled in isolation by any one group. The type and frequency of engagement of any individual, family or community in specific activities determine the complex social dynamics involving possible interactions with animals, as well as the intensity of interactions and thus potential exposure to pathogens [8]. Building trust within communities to comply with public

health and social measures has been documented as keys to the success of the intersectoral humanitarian approach. During the COVID-19 pandemic RCCE strategies were recommended for 13 African countries, so that they might effectively contain the outbreak and prepare for future public health emergencies. The strategies effectively addressed the challenges faced by medical authorities in engaging the community at the outset of the response plan to COVID-19 [7].

The WHO Director General has released standing guidelines for Mpox as we move into the control and eradication phase of the global response to the disease and address the still-emerging danger in endemic areas [2]. Among other things, the guidelines propose that countries improve community safety by increasing the capacity for RCCE. This in turn involves modifying social and public health policies to fit local conditions, while also maintaining efforts to promote equity and foster relationships with communities [10]. Plans and actions related to RCCE during Mpox epidemics should focus on increasing public knowledge to avoid and/or address the stigma and discrimination commonly seen in endemic areas. With Mpox outbreaks, people in conflicts zones of Eastern DRC need to understand the health risks they face and observe prevention measures put in place by the public health authorities [11].

RCCE is critical for this, and like all other forms of communication, should be customized to address the cultural roots of the target community. When the content is irrelevant to the community's knowledge systems, or the community cultural context has not been considered, poorly structured health communication may lead to that otherwise well-planned health message being ignored or rejected, because the source of the information is perceived as untrustworthy. Thus, community participation is a critical component in epidemic responses. Communities may help to reduce the effect of epidemics and safeguard public health by fostering trust, conveying accurate information, and encouraging adherence to public health policies. The unique challenges of managing an outbreak of Mpox in a conflict zone, which is an under-researched area and relevant to the social-determinant aspects of the One Health perspective. The work emphasizes the critical role of Risk Communication and Community Engagement in outbreak response, particularly in fragile settings. It outlines strategies for building trust and engaging communities in conflict zones that could be adapted for use in similar contexts globally.

2. Interventions to promote risk communication and community engagement during the Mpox outbreak eastern in DRC

Given the unique challenges posed by the Eastern DRC's fragile conflict zones, social, and economic upheavals of the Ebola virus disease and COVID-19 pandemic, effective interventions for RCCE must be tailored to address the specific needs and circumstances of the region [12,13]. The declaration of Mpox as a Public Health Emergency by Africa CDC and WHO, will become a strategic move that will improve the continent's collective and coordinated response to the outbreak. During an outbreak, there may be uncertainty about risk behaviors, access to vaccines, testing, the route of transmission and care, which communities are at risk, and understandable anxiety. Unique challenges to the Eastern DRC in this regard include community resistance and security issues because of the ongoing conflicts [10–13].

RCCE initiatives can help impacted communities become aware of these risks and establish preventive behaviors. As the number of new cases in the eastern DRC grows, international attention has been attracted by concerns about human, animal, and environmental health [14]. The deployment of surveillance systems and upgraded diagnostic tools for emerging infections should be prioritized by national and regional public health sectors. Key components to RCCE initiatives are listed below.

Building Trust and Credibility:

- Establish strong relationships with community leaders, traditional authorities, and local organizations to build trust and credibility.
- Provide clear and honest information about Mpox, its symptoms, and prevention measures.
- Use local languages to ensure that messages are understood and accessible to all community members [15,16].

Tailor Messaging and Cultural Sensitivity:

- Develop messages that resonate with local cultural values and beliefs, avoiding language that could be perceived as offensive or stigmatizing.
- Involve community members in the development of messages and materials to ensure their relevance and effectiveness [14,15].

Leveraging Community Networks:

- Train and equip community health workers to disseminate information and provide support to affected individuals.
- Engage traditional healers to promote health messages and address cultural beliefs related to illness. In implementing of RCCE in a country, the response teams must approach the leaders and population by first understanding their perspectives, soliciting their feedback, sharing information, and engaging them in the epidemic response [14,15].

Safe and Accessible Information Dissemination:

- Reach a large audience through a variety of communication platforms, such as radio, television, social media, and community gatherings.
- Deploy mobile health units to rural and difficult-to-reach places. To effectively manage an Mpox outbreak, a full range of online and offline tools to collect feedback from the community should be used by the health authorities and involved partners, engaging local leaders in the preparedness and response activities in the affected communities [10].

Addressing Security Concerns:

- The outbreak of Mpox, particularly in regions experiencing conflict, presents a significant challenge for public health and humanitarian efforts. The intersection of these two crises can exacerbate the spread of the disease, hinder response efforts, and disproportionately impact vulnerable populations.
- Develop security protocols to ensure the safety of health workers and community members during information dissemination activities.
- Work closely with local security forces to obtain safe passage and protection [12–17].

Addressing Misinformation and Rumors:

- Establish fact-checking mechanisms to counter misinformation and rumors. By being aware of the warning signs and symptoms, the way the virus spreads, what to do if one becomes sick, and the danger in neighborhoods or community, people may lower their risks of contracting Mpox. Those who exhibit any of the symptoms or indicators of Mpox should speak candidly with others before forming intimate relationships. The risk of human-to-human transmission can be mitigated by avoiding close contact with infected individuals including sexual contact, as well as contaminated materials such as bedding, clothing, or sharps such as needles [16].

Addressing Stigma and Discrimination:

- Promote education and awareness about stigma and discrimination, emphasizing the importance of empathy and understanding.
- Support services for Mpox victims should be provided, including Civil Society Organizations that are already engaged in related health advocacy or service provision, such as those serving key population with sexual health issues. These groups can offer focused feedback and help in more effectively reaching particular demographics [13,14].

Capacity Building and Training:

- Train health workers in RCCE techniques, cultural sensitivity, and crisis communication. People with symptoms that might be caused by Mpox frequently seek treatment at health-care institutions.
- It is critical that health personnel learn and utilize proper language to make patients feel comfortable and respected while receiving care. People seeking care in health institutions for whatever reason should be treated with confidentiality, kindness, and respect by both health workers and other support staff [13,14].

Preventing the Mpox Outbreak in communities, through the One Health approach

The Mpox outbreak highlights the urgency of addressing zoonotic diseases like Mpox through comprehensive, integrated approaches that consider the interconnection of human, animal, and environmental health. The One Health approach offers a pathway to more resilient communities where the health of people, animals, and the environment is protected through coordinated, collaborative action. RCCE may leverage mass and social media campaigns to raise awareness of zoonotic diseases and prevention methods, engage in rumor tracking and misinformation management [8].

Further, risk communication using a One Health approach may leverage mass and social media campaigns to promote awareness about zoonotic illnesses and preventive measures. Healthcare workers and other members including civil society groups, and media professionals involved in the outbreak response should be trained to emphasize the importance of team-work to fight health threats that affect all three One Health domain (human, animal, and environmental health sectors). This strategy is especially pertinent in the situation of Mpox since it brings all stakeholders together to address the linked elements that contribute to Mpox's spread. Empowering communities to manage risks, identify epidemics, and avoid infected or reservoir species to avert outbreaks [12].

Therefore, to foster the materialization process, and implementation of the RCCE during the outbreak of Mpox in the fragile Conflict Zones of Eastern DRC, it is important for local and international public health communities, including researchers, to stand in solidarity with conflict-affected communities, without discrimination, and to take effective action to combat the disease while avoiding instilling fear and stigma.

3. Limitations of implementing RCCE during Mpox outbreak in Eastern DRC

The province of North Kivu has been an epicenter of armed conflict in the eastern part of DRC for several years. The Mpox outbreak has become an additional focus for stigma and discrimination, and this can lead to serious impact on health outcomes and undermine the outbreak response by making people reluctant to come forward or seek care. This increases the risk of transmission both within the most affected communities and beyond [3–5]. There are a lot of unknowns and uncertainties associated with the ongoing Mpox outbreak. The implementation of RCCE strategies in the response to monkeypox requires acknowledging the unknown, such as the possibility of undetected transmission over time, and the reason behind patients not exhibiting the typical clinical presentation of the disease [8].

In conflict zones, rumors and misinformation often proliferate,

creating confusion and distrust among the population. Previous experiences with government and humanitarian organizations may have eroded trust, making it difficult to establish credibility and gain acceptance of health messages [15,16]. Conflict often disrupts healthcare systems, so that people can not access diagnosis, treatment, and prevention services for Mpox. These issues can lead to increased transmission and severe outcomes [16]. Insufficient financing might impede the development and execution of comprehensive RCCE initiatives, such as the creation of culturally relevant materials and the training of health professionals. Such factors in this location may impede the implementation and delivery of risk communication and community engagement during the Mpox outbreak [17]. The success of risk communication to the public during catastrophes and conflicts in the Eastern DRC is primarily reliant on community trust in government authorities. As a result, preserving and fostering confidence in government is an important consideration when conveying news of emergencies and danger to the community [12–17].

Collaboration between government agencies, humanitarian organizations, and local communities is essential for effective RCCE in the face of complex emergencies. To respond effectively to these problems, initiatives to educate and urge the public to adopt preventive behaviors against the epidemic might benefit from combining professional advice with local community expertise and leadership. Community leaders and members should be included in the development, execution, and assessment of interventions so that local perspectives are understood, feedback is solicited, information is shared, and the outbreak is addressed collectively.

4. Conclusion

With the unique challenges posed in the Eastern DRC fragile conflict zones; effective interventions for Risk Communication and Community Engagement (RCCE) must be tailored to address the specific needs and circumstances of the region. Awareness of One Health as a concept is increasing, but until it is put into action, the globe will remain vulnerable to new disease outbreaks. Local, national, and international public health communities, including researchers, should make concerted efforts to implement strong measures and sustainable initiatives focusing on ensuring a resilient healthcare system, promoting proper risk communication and community engagement during the Mpox outbreak, to enhance community protection by building capacity for RCCE, adapting public health and social measures to local contexts, and continuing to strive for equality. Managing an outbreak, and particularly Mpox outbreak, in a conflict zone requires adopting a One Health approach and a well-developed and implemented plan for Risk Communication and Community Engagement.

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Declaration of competing interest

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