

## From COVID-19 to Mpox, How Can We Engage Communities in Cameroon?

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### Abstract

**Background:** COVID-19 pandemic exposed major challenges for involving communities in Cameroon through risk communication. To solve these problems and improve responses to future epidemics including Mpox, national study was carried out to identify the most appropriate communication channels and tools for involving communities during health emergencies.

**Methodology:** Convergent mixed-methods study was conducted over three months across all region. Quantitative component involved a stratified cluster sampling of participants aged 18 and above who resided in Cameroon since March 2020, with data collected via an electronic form on KoboCollect. Data analysis used Python 3.12 and Excel, with a significant threshold set at  $p < 0.05$ . Qualitative component included semi-structured interviews and focus group discussions, transcribed and analyzed using NVivo.

**Findings:** A total of 10,400 participants were surveyed, and 5,141 households visited. Television (23.56%), radio (21%), and

social media (15.91%) were most frequently used communication channels. Visual materials like posters (42.97%) being particularly attractive. Statistical analysis revealed significant influences on channel used based on comorbidities ( $P < 0,001$ ;  $OR = -0,44 [-0,64 - -0,24]$ ); secondary education level ( $P < 0,001$ ;  $OR = 0,42 [0,24 - 0,59]$ ) and university level ( $P < 0,001$ ;  $OR = 0,42 [0,20 - 0,65]$ ). Health information provided by health leaders (34.12%) and community leaders (22.20%) was deemed most reliable.

**Interpretation:** Television and radio remain essential communication channels, while visual media are highly appealing to diverse populations. Contextualizing Risk Communication and Community Engagement, using trusted community and health leaders, will strengthen response to current Mpox epidemic and future outbreaks.

## 1. Introduction

Risk Communication and Community Engagement (RCCE) is a pillar for Public Health Emergency (PHE) preparedness, response and resilience [1-2], and is one of the core capabilities of the International Health Regulation (IHR) 2005 [3-4]. It enables authorities and experts to listen and respond to citizen's concerns and needs, ensuring that the advice provided is relevant, trustworthy and acceptable [5-6].

In Cameroon, recent health crises such as the COVID-19, cholera, yellow fever and Mpox epidemics have revealed major challenges for the efficient implementation of RCCE in context of limited resources and socio-cultural diversity [8]. Indeed, several evaluations (IAR<sup>1</sup>, AAR<sup>2</sup>) have noted the need to strengthen the commitment of community actors by improving the communication strategies used to raise awareness among at risk populations based on evidence [9-12].

With this in mind, we conducted a study to identify the most influential communication channels and tools for RCCE on COVID-19 and other public health events in Cameroon. The aim of this article is to present and analyze the most suitable communication channels and tools in a socio-culturally diverse country like Cameroon.

## 2. Methods

### 2.1 Type of Study

We conducted a cross-sectional parallel convergent mixed study.

#### 2.1.1 Study Setting

The study took place over three months (October-December 2023) in two Health Districts (HD) in each region of the country, considering urban-rural specificities.

#### 2.1.2 Participants and Sampling

For the quantitative component, participants were at least 18 years old, permanently residing in Cameroon since March 2020. Those refusing to complete the questionnaire were excluded from the study. Sampling was carried out at national level using stratified single-stage cluster sampling, with each region representing a stratum. Clusters were made up of urban and rural neighborhoods and villages in the selected HD. The number of clusters depended on the target population in the Health District. The sample size calculated at national level using the Lorentz formula was allocated by region, considering the demographic weight estimated by

Central Office of Census and Population Studies (COCPS) 2019 [13]. A total of 10,400 people took part in the household survey via an electronic form on Kobo Collect, accessible from tablets or any other online device. A maximum of five people was interviewed per selected household.

For the qualitative component, semi-structured individual interviews and Focus Group Discussion (FGD) were organized in all regions, using discussion guides developed by the research team. Refusal to participate and inaudible recordings led to exclusion. The individual interviews concerned resource persons involved in RCCE implementation at regional, HD and community. In each region, six FGD were conducted with young adolescents (aged 18-20), young adults (aged 21 and over), pregnant women, elderly people with co-morbidities (HIV, hypertension, diabetes) and the general population. The qualitative data collected were recorded using Dictaphones with the consent of the interviewees in an appropriate space. A total of 111 individuals interviewed and 60 FGD were organized in all regions of Cameroon.

### 2.2 Study Variables

For the quantitative component, the variables collected on the communication channels and tools made it possible to identify those that were the most influential, considering the confidence of the participants. The determinants of the use of a communication channel and tools (gender, location, age, etc.), which could influence their choice, were also considered. For the qualitative component, semi-structured individual interviews and FGD focused on identifying the communication channels and tools with the greatest influence on participant's behavior and analyzing the determinants of participants' use of a communication channel and tools.

### 2.3 Data Analysis

We analyzed the quantitative and qualitative data independently, but their different results were interpreted together. Descriptive and statistical analyses of the quantitative data were carried out. Bivariate and multivariate logistic regression and chi-square tests were used to measure associations between variables. The P-value at 5% was used to identify a statistically significant difference. Analyses were performed using Python 3.12 and Excel. The qualitative data were transcribed using Word software, categorised by item and analysed using N-Vivo software. Data analysis was based on data oriented towards the study objectives.

1 Intra Action Review of the management of COVID-19 in 2021 and 2022, RIA of the management of cholera in 2023.

2 After Action Review of the management of the Africa Cup of Nations Total Energies 2021 in 2022.

## 2.4 Ethical Considerations

This study was approved by the National Ethics Committee of Cameroon under reference number N° 2023/10/1593/CE/CNERSH/SP. It was also approved by the Centers for Disease Control and Prevention (CDC) Atlanta as a public health activity. No changes to the protocol were made after ethical clearance was obtained.

## 2.5 Role of the Funding Source

CDC Atlanta played a role in study design, data collection, data

analysis, data interpretation, report writing and article writing.

## 3. Results

### 3.1 Quantitative Component

#### 3.1.1 Socio-Demographic Characteristics of Participants

A total of 10,400 people was interviewed, and 5,41 households visited in all regions. The most represented regions were Centre 1973 (19%), Far North 1810 (17.4%) and Littoral 1477 (14.2%). The median age of the participants was 32, with an Inter-quartile range of 25 to 43. The sex ratio (M/F) was 0.94:1 indicating a slight preponderance of women. Most of the participants were married, 4938 (47.5%), and the most common level of education was secondary, 4891 (47%). Finally, the Christian Catholic religion was most represented with 3803 (36.56%) (table 1)

Variables	Numbers (N=10400)	Percentage (%)
<b>Age</b>		
Age (années), min, max : 18 ;93		
Median age (q1 ; q3) : 32 (25 ; 43) ;		
<b>Gender</b>		
Male	5040	48,5
Female	5360	51,5
<b>Marital status</b>		
Married	4938	47,5
Divorced	219	2,1
Widowed	422	4,1
Single	4159	40,0
Common-law partner	662	6,4
<b>Level of education</b>		
Primary	3444	33,1
Secondary	4891	47,0
University	2065	19,9
<b>Religion</b>		
Catholic	3803	36,6
Protestant	3087	29,7
Muslim	2843	27,3
Other	667	6,4
<b>Region</b>		
Adamawa	532	5,1
Centre	1972	19,0
East	349	3,4
Far-North	1810	17,4
Littoral	1476	14,2
North-West	918	8,8
North	1209	11,6
West	1124	10,8
South	326	3,1
South-West	682	6,6
<b>Age groups</b>		
18 – 19	216	2,0
20 – 29	4081	39,2
30 – 39	2889	27,7
40 - 49	1611	15,4
50 – 79	1551	14,9
80 – plus	52	0,5

**Table 1: Description of the Socio-Demographic Characteristics of Participants**

Communication channels and tools most influential on participant's behavior

The most used by participants are television (23.56%), radio (21%) and social networks (15.91%), regardless of age group (table 2).

Communication channels	Age groups						Total (N = 29899)
	18 – 19 (N = 593)	20 – 29 (N = 11943)	30 - 39 (N = 8396)	40 – 49 (N = 4605)	50 – 79 (N = 4247)	80 + (N = 115)	
Radio	123 (20,74%)	2469 (20,67%)	1711 (20,38%)	991 (21,52%)	951 (22,39%)	34 (29,75%)	6279 (21%)
Television	124 (20,91%)	2857 (23,92%)	2022 (24,08%)	1087 (23,62%)	930 (21,9%)	23 (20%)	7043 (23,56%)
Social networks	107 (18,04%)	2227 (18,65%)	1395 (16,62%)	617 (13,4%)	403 (9,49%)	9 (7,83%)	4758 (15,91%)
Internet	26 (4,38%)	598 (5,01%)	404 (4,81%)	617 (13,4%)	119 (2,8%)	1 (0,87%)	1328 (4,44%)
Church/Mosque	26 (4,38%)	589 (4,93%)	422 (5,03%)	258 (5,6%)	255 (6%)	5 (4,35%)	1555 (5,2%)
Family member	17 (2,87%)	317 (2,65%)	251 (2,99%)	127 (2,76%)	135 (3,18%)	2 (1,74%)	849 (2,84%)
Friends	9 (1,52%)	203 (1,7%)	174 (2,07%)	80 (1,74%)	75 (1,77%)	1 (0,87%)	542 (1,81%)
Vaccinators	24 (4,05%)	431 (3,61%)	333 (3,97%)	194 (4,21%)	204 (4,8%)	4 (3,48%)	1190 (3,98%)
Social mobilisers	50 (8,43%)	788 (6,6%)	573 (6,82%)	371 (8,06%)	405 (9,54%)	8 (6,96%)	2195 (7,34%)
Health Facilities	21 (3,54%)	483 (4,04%)	352 (4,19%)	233 (5,06%)	212 (4,99%)	8 (6,96%)	1309 (4,38%)
Community health worker	53 (8,94%)	747 (6,25%)	583 (6,94%)	374 (8,12%)	442 (10,41%)	15 (13,04%)	2214 (7,4%)
Doctors	9 (1,52%)	198 (1,66%)	143 (1,7%)	64 (1,39%)	95 (2,24%)	3 (2,61%)	512 (1,71%)
Traditional healer	1 (0,17%)	10 (0,08%)	12 (0,14%)	7 (0,15%)	11 (0,26%)	1 (0,87%)	42 (0,14%)
Other(s)	3 (0,51%)	26 (0,22%)	21 (0,25%)	22 (0,48%)	10 (0,24%)	1 (0,87%)	83 (0,28%)

**Table 2: Distribution of the Most Frequently Used Communication Channels Among the Population Surveyed, By Age Group**

In terms of trust, television is most reliable for 28.71% of participants, followed by radio (22.39%) and social networks (10.39%), regardless of age. Those living with comorbidities

trusted television (30.59%) and radio (24.03%). Health information provided by public health (34.12%), community (22.20%) and religious (16.07%) leaders are the most reliable (table 3).

Means of communication	Age groups						Total (N = 22799)
	18 – 19 (N = 506)	20 – 29 (N = 8843)	30-39 (N = 6049)	40-49 (N = 3588)	50-79 (N = 3361)	80 + (N = 92)	
Radio	110 (21,74%)	1960 (22,16%)	1388 (21,66%)	827 (23,05%)	788 (23,45%)	32 (34,78%)	5105 (22,39%)
Television	134 (26,48%)	2646 (26,92%)	1874 (29,24%)	1039 (28,96%)	830 (24,7%)	23 (25%)	6546 (28,71%)
Social Network	66 (13,04%)	1089 (12,31%)	726 (11,33%)	279 (7,78%)	208 (6,19%)	4 (4,35%)	2372 (10,4%)
Internet	23 (4,55%)	327 (3,7%)	230 (3,59%)	89 (2,48%)	63 (1,87%)	1 (1,09%)	733 (3,22%)
Church/Mosque	29 (5,73%)	396 (4,48%)	282 (4,4%)	178 (4,96%)	195 (5,8%)	4 (4,35%)	1084 (4,75%)
Family member	9 (1,78%)	202 (2,28%)	145 (2,26%)	74 (2,06%)	89 (2,65%)	2 (2,17%)	521 (2,29%)
Friends	3 (0,59%)	96 (1,09%)	77 (1,2%)	35 (0,98%)	39 (1,16%)	0 (0%)	250 (1,1%)
Vaccinators	17 (3,36%)	292 (3,3%)	214 (3,34%)	153 (4,26%)	147 (4,37%)	3 (3,26%)	826 (3,62%)
Social mobilisers	35 (6,92%)	553 (6,25%)	434 (6,77%)	279 (7,78%)	324 (9,64%)	6 (6,52%)	1631 (7,15%)
Health Facilities	21 (4,15%)	390 (4,41%)	295 (4,6%)	182 (5,07%)	171 (5,09%)	4 (4,35%)	1063 (4,66%)
Community Health Worker	40 (7,91%)	599 (6,77%)	509 (7,94%)	323 (9%)	388 (11,54%)	10 (10,87%)	1869 (8,2%)

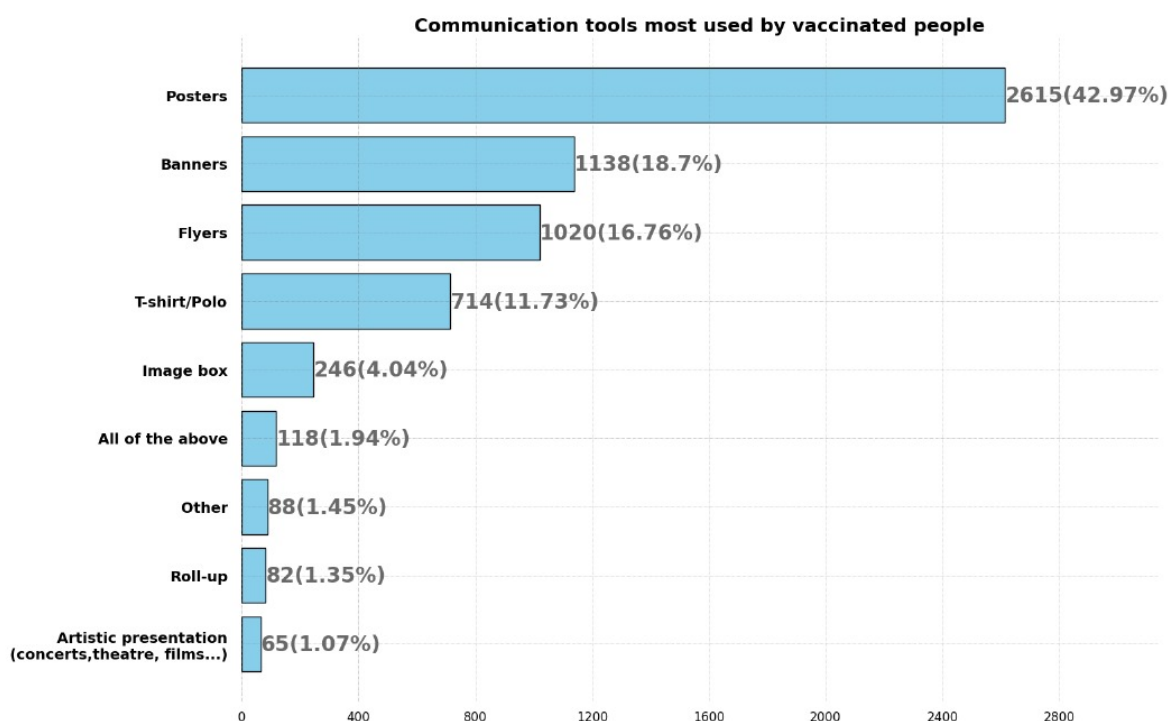
<b>Doctors</b>	15 (2,96%)	243 (2,75%)	190 (2,96%)	106 (2,95%)	96 (2,86%)	2 (2,17%)	652 (2,86%)
<b>Traditional healer</b>	1 (0,2%)	8 (0,09%)	11 (0,17%)	4 (0,11%)	6 (0,18%)	1 (1,09%)	31 (0,14%)
<b>Other(s)</b>	3 (0,59%)	42 (0,47%)	34 (0,53%)	20 (0,56%)	17 (0,51%)	0 (0%)	116 (0,51%)

**Table 3: Description of The Means of Communication Trusted by the Populations Surveyed, By Age Group**

The most attractive communication tools were posters (7,143 or 42.79%) and banners (3,889 or 23.39%) for all age groups and all genders. Regarding acceptance to COVID-19 vaccination, 3154 (30.32%) participants were vaccinated. Radio (21.67%), television (20.63%) and Community Health Worker (CHWs) (9.65%) were the most frequently used communication channels.

The health information provided by public health leaders (34.12%), community leaders (22.20%) and religious leaders (16.07%) was the most reliable for participants.

Posters (42.97%), banners (18.7%) and flyers (16.76%) were the most attractive tools (figure1).



**Figure 1: Communication Tools Most Used by Vaccine People**

### 3.1.2 Determinants of the use of Communication Channels and Tools

The use of communication channel was statistically influenced by the presence of comorbidity ( $P < 0.001$ ; OR = -0.44 [-0.64 - -0.24]), and the use of a communication tools by level of education, notably secondary ( $P < 0.001$ ; OR = 0.42 [0.24 - 0.59]) and university ( $P$

$< 0.001$ ; OR=0.42 [0.20 - 0.65]). It was also influenced by the Eastern region ( $P < 0.001$ ; OR =1.44 [0.49 - 2.40]), the Far North ( $P < 0.001$ ; OR=0.98 [0.50 - 1.45]), Littoral ( $P < 0.001$ ; OR =-0.66 [1.06 - 0.26]), North ( $P < 0.001$ ; OR=-0.76 [1.16 - 0.36]) and South ( $P < 0.001$ ; OR =1.37 [0.42 - 2.33]). (table 4).

Variables	Use of a communication tools		ORa	P-value	CI 95%
	No (N = 651)	Yes (N = 9749)			
<b>Gender</b>					
Female	356	5004	Reference		
Male	295	4745	0,13	0,09	[-0,02 – 0,29]
<b>Level of studies</b>					
Primary	276	3168	Reference		
Secondary	264	4627	0,42	P < 0,001	[0,24 – 0,59]
University	111	1954	0,42	P < 0,001	[0,20 – 0,65]
<b>Religion</b>					
Others (s)	53	614	Reference		
Catholic	214	3589	0,36	0,02	[0,05 – 0,68]
Muslim	217	2626	0,04	0,78	[-0,26 – 0,35]
Protestant	167	2920	0,41	0,16	[0,09 – 0,73]
<b>Region</b>					
Adamawa	31	501	Reference		
Centre	96	1876	0,18	0,37	[-0,22 – 0,60]
East	5	344	1,44	P < 0,01	[0,49 – 2,40]
Far North	41	1769	0,98	P < 0,001	[0,50 – 1,45]
Littoral	158	1318	-0,66	P < 0,01	[-1,06 - -0,26]
North	142	1067	-0,76	P < 0,001	[-1,16 - -0,36]
North-West	64	854	-0,19	0,39	[-0,63 – 0,25]
West	76	1048	-0,15	0,47	[-0,59 – 0,27]
South-West	33	649	0,19	0,44	[-0,30 – 0,70]
South	5	321	1,37	P < 0,01	[0,42 – 2,33]

**Table 4: Description of Variables According to Multivariate Regression on The Use of**

### 3.2 Qualitative Section

Three main topics emerged from the interviews: involving the most influential resource people in communication, capitalizing on community spaces, and capitalizing on influential communication channels and tools.

#### 3.2.1 Involving the Most Influential Resource People in Communication

Several participants felt that community, traditional and religious leaders are better placed to deliver effective communication within the community, because the population trust them, and they are role models.

*“(…) in a group where the traditional authority does not agree with what you come to do they also have their means of communication to influence the communities not to accept what you bring, you are not going to see people running to start telling people here is the chief says that they’ (Es\_EI\_PFR\_17/11/2023)”*

Journalists were seen by some participants as influential, as they conveyed a reliable and trusted message. They felt that the risk of misinformation coming from them was low, because they verify it. *“I consider information from Journalist those I know because I think they cannot give information that is not verified so when I see information from them, I take it very serious.” (NW\_FGD\_FE\_21/11/2023)*

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Healthcare staff were the people authorized to maintain effective communications within the community. Several participants had taken the example of the influence of the message given by personnel during the COVID-19 pandemic.

CHWs are people who can communicate and convey information quickly because they are constantly in contact with the community, also with leaders who trust them on the quality of the message.

In addition, the type of messages to be conveyed must be adapted to each community. The local language must be used to ensure that the information is accessible to all, especially in rural areas.

*“« You have to speak their language [...] Today, you have to design targeted messages [...]”* (Es\_Ei\_PFCR\_15/11/23)

### 3.2.2 Capitalizing on Community Spaces

In all regions of Cameroon, the physical gathering spaces known as community spaces were identified as the most influential spaces for communication. These were diverse, and included religious, residential, school, traditional (chiefdoms), community entertainment, hospital and commercial spaces. Although religious and traditional spaces were favored, residential spaces were more so, especially in rural areas.

*“I say that wherever there are gatherings, in churches, hospitals, mosques, public squares, even markets”.* (Ou\_FGD\_Fe\_R1\_16/11/23)

Moreover, communication in hospital spaces was identified as a preferred communication space by pregnant women and people living with comorbidities.

Schools were presented as influential communication spaces for children and teenagers.

### 3.2.3 Capitalizing on Influential Communication Channels and Tools

Some participants stressed the importance of capitalizing on all types of radio and TV (public, private, local, national, international). *“Uhhh to me I think the national station should not be used at a certain level because most people believe that the national station are just there to make money and just make stuff, so, there's a way we use private stations like equinox because most people believe in equinox more than they do believe in CRTV”.* R3 (NW\_FGD\_AGE\_15/11/2023)

Others pointed out that radio and television were more suitable for the elderly, as they had become accustomed to trusting the information they heard.

*“Now for the elderly, we know that they like to listen to the radio and television, so we can use them to raise awareness. ...”* (Ou\_R1\_FGD\_Fe\_16/11/2023)

Most participants agreed that social networks had a huge influence today. They are often at the origin of rumors circulating within the community, because they are followed, and some people hardly trust the information given by contacts.

Young people were identified as the most influenced by social networks.

*“...the age group most affected are those aged 20 and over what they use today are social networks, so we need to do some really*

*digital communication to be able to reach this target group.”* (Ce\_EI\_PF\_15/11/2023)

Visual communication media, particularly posters, were the most popular among participants. In fact, according to the participants, they use images to capture attention and better fix ideas in the minds of the target audience.

*“For example, if you organise an educational talk with visual aids, people get on board, because they see, you bring them in, you show them gravity, it starts here, it ends there, if you don't do this, you'll have to do this with supporting images, and people get on board.”.* (Lit\_EI\_LC2\_16/11/2023)

### 3.3 Integration of Quantitative and Qualitative Results

There were no discrepancies between the quantitative and qualitative results of this study. Firstly, the results of both parts of the study showed that the most influential communication channels are television and radio. However, the new elements are the use of CHWs in the quantitative section and the use of social networks in the qualitative section. The study components also converged on the theme of identifying the communication tools most influential on participant's behavior. Posters were the most attractive tools. In addition, both sections agreed that communication strategies should include a specific channel for people with co-morbidities. Finally, level of education and region were determinants of the use of communication tools by target populations recognized by both strands.

## 4. Discussion

Effective communication is an essential component for crisis management. Numerous studies demonstrate that trust in the news media and in governments is paramount in the context of a health crisis, as it acts as a protective factor [14-15]. Countries or regions with low institutional trust tend to have higher death and infection rates during the COVID-19 pandemic [16-17-18]. Pre-pandemic COVID-19 studies also found that when institutional trust is high in the population, people tend to comply with institutional norms and guidelines by following the instructions and recommendations of health authorities [19-20].

In our study, the analysis of people's confidence in the information disseminated diverges. This is illustrated by the fact that most participants stated that, in order of preference for information relating to the COVID-19, those coming from their community had priority. Indeed, community involvement was particularly effective when it was generated by CHWs. This aligns with a study conducted in Africa which found that individuals felt more able to be influenced by decisions made at community level (34%) than those made at national level (22%) [21-22-23]. This underlines the importance of the channel through which the message is disseminated, as much as its content. According to the study, CHWs are direct relays from the State to citizens. The capitalization of community spaces confirmed the importance of interpersonal communication within the RCCE framework for epidemics,

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pandemics and PHE in Cameroon. In fact, they emerged as the most influential spaces for communicating with the targets who frequent them. It is therefore crucial to maintain excellent proximity when communicating within communities and their citizens.

The results of a study on trust in institutions and the role of digital social networks in the context of COVID-19 in Cameroon in 2020 showed that Internet users prefer audio and audiovisual media for information on institutional communications or disease [24]. These results concur with those found in our study. Our results corroborate observations made in Uganda, where radio and CHWs were also trusted sources [25-26]. Although the study found that traditional mass media, particularly radio and TV, had the greatest impact, social networks also exerted an influence, particularly among young people.

Posters captured the attention of participants our study. This is because they are generally designed with attractive visual elements that facilitate understanding and engagement. By combining text and visuals, posters help to reinforce the memorability of health messages. This finding is reinforced by similar observations in Uganda, where posters and images were also preferred [27]. They are accessible without the need for advanced technology and can therefore be used in all regions. As a result, visual tools, particularly posters, should be prioritized in message dissemination strategies during RCCE in Cameroon.

Level of education and region were significant determinants of the use of communication media. Socio- educational, cultural and geographical factors influence the preferences and effectiveness of communication channels for disseminating health information. To optimize the implementation of RCCE, it is essential to take these factors into account to design media tailored to specific needs of different populations and regions. Co-morbidity status is a significant determinant in the choice of communication tools used. This observation reveals the impact of health status on the preference for an effectiveness of different communication channels for disseminating health information [28]. Communication strategies must consider the specific needs of people with comorbidities by designing adapted tools that offer integrated and personalized information. It is also important to use a multi-channel approach to meet the requirements of this population. It is essential to emphasize that community engagement mechanisms must be specifically adapted to the realities of local communities.

Despite the expansion of social networks, the so-called traditional media (television and radio) remain those most used by the Cameroonian population. Non-media communication, which is essential for engaging the population, must rely primarily on community leaders and local health workers. Visual aids should be prioritized and contextualized to socio-cultural diversity. Indeed, in rural areas, Mpox is primarily linked to animals and populations are often less educated, engagement should primarily occur through community leaders and CHW. In urban areas,

where Mpox transmission, particularly with the clade IB currently circulating can occur through sexual contact, communication strategies should rely on mass media such as television and radio. This information should help improve communication strategies to empower Cameroonian populations at the course of public health emergencies, particularly Mpox.

### Limitations

Although the study is national in scope, it was limited to a few cities in the regions and is therefore not exhaustive. Furthermore, it did not consider the print media, which are strongly represented in the country but not widely consumed by the population [29-30].

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### References

1. Dubé, È., Labbé, F., Malo, B., & Pelletier, C. (2022). Public health communication during the COVID-19 pandemic: perspectives of communication specialists, healthcare professionals, and community members in Quebec, Canada. *Canadian Journal of Public Health, 113*(Suppl 1), 24-33.
2. World Health Organization. (2020). *Risk communication and community engagement (RCCE) readiness and response to the 2019 novel coronavirus (2019-nCoV): interim guidance, 26 January 2020*. World Health Organization.
3. Dahne, J., Nahhas, G. J., Wahlquist, A. E., Cummings, K. M., & Carpenter, M. J. (2020). State tobacco excise taxation, comprehensive smoke-free air laws, and tobacco control appropriations as predictors of smoking cessation success in the United States. *Journal of Public Health Management and Practice, 26*(5), E1-E4.
4. Gavriilidis, G., & Östergren, P. O. (2012). Evaluating a traditional medicine policy in South Africa: phase I development of a policy assessment tool. *Global health action, 5*(1), 17271.
5. Fédération Internationale de la Croix-Rouge et du Croissant-Rouge. COVID-19 : Rapport de rétroaction de la communauté n°21 Région Afrique ; rapport à venir. 2020.
6. Hyland-Wood, B., Gardner, J., Leask, J., & Ecker, U. K. (2021). Toward effective government communication strategies in the era of COVID-19. *Humanities and Social Sciences Communications, 8*(1), 1-11.
7. Mandeng, N. J., Endalle Ezzo, L., Nsangou, M., Tizi, N. B., Kenko, I., Ntone, R., ... & Mballa, G. A. E. From COVID-19 to Mpox, How Can We Engage Communities in Cameroon?.
8. Eid, M., et al. (2021). Facteurs qui influencent l'efficacité des campagnes de communication des risques dans les contextes à ressources limitées, en mettant l'accent sur l'importance de l'adaptation culturelle et linguistique.
9. mondiale de la Santé, O. (2015). *Estimations de l'OMS sur*



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la charge mondiale de morbidité imputable aux maladies d'origine alimentaire: résumé d'orientation (No. WHO/FOS/15.02). Organisation mondiale de la Santé.

10. mondiale de la Santé, O. (2020). *Guide pour la conduite d'une revue intra-action (RIA) de la COVID-19, 23 juillet 2020* (No. WHO/2019-nCoV/Country\_IAR/2020.1). Organisation mondiale de la Santé.
11. Aujla, N., Chen, Y. F., Samarakoon, Y., Wilson, A., Grolmusova, N., Ayorinde, A., ... & Lilford, R. J. (2021). Comparing the use of direct observation, standardized patients and exit interviews in low-and middle-income countries: a systematic review of methods of assessing quality of primary care. *Health policy and planning, 36*(3), 341-356.
12. Mandeng, N. J., Endalle Ezzo, L., Nsangou, M., Tizi, N. B., Kenko, I., Ntone, R., ... & Mballa, G. A. E. From COVID-19 to Mpox, How Can We Engage Communities in Cameroon?.
13. Mandeng, N. J., Ezzo, L., Nsangou, M., Tizi, N. B., Kenko, I., Ntone, R., ... & Mballa, G. A. E. (2024). From COVID-19 to Mpox, how can we engage communities in Cameroon?.
14. Wright L, Steptoe A, Fancourt D. What predicts adherence to COVID-19 government guidelines? Longitudinal analyses of 51,000 UK adults. 2020 ;28.
15. Malecki, K., et al. (2021) – "Crisis communication and public trust during the COVID-19 pandemic. Manière dont la confiance dans les médias et les gouvernements influence les comportements du public face à une crise sanitaire. Elle souligne que des messages cohérents et clairs renforcent la confiance et l'adoption des mesures de prévention.
16. Goldstein, D. A., & Wiedemann, J. (2022). Who do you trust? The consequences of partisanship and trust for public responsiveness to COVID-19 orders. *Perspectives on Politics, 20*(2), 412-438.
17. Bargain, O., & Aminjonov, U. (2020). Trust and compliance to public health policies in times of COVID-19. *Journal of public economics, 192*, 104316.
18. Gollust, S. E., Nagler, R. H., & Fowler, E. F. (2020)– "The role of public trust in the COVID-19 response: A national survey". Cette étude souligne que les niveaux de confiance publique dans les institutions sont directement liés à l'efficacité des réponses à la pandémie, avec des pays à faible confiance ayant des résultats de santé plus défavorables.
19. Letki N. Investigating the roots of civic morality: Trust, social capital, and institutional performance. *Polit Behav. 2006 ;28*(4) :305-25.
20. Nivette, A., et al. (2021). "Trust in institutions and compliance with COVID-19 containment measures: Evidence from a national survey" Résultats pré-pandémiques et établit un lien clair entre la confiance institutionnelle et la conformité aux directives, en s'appuyant sur des données antérieures à la pandémie.
21. Marx, P. (2020). La santé communautaire: un levier pour faciliter l'accès à la couverture maladie universelle?– Focus sur plusieurs expériences internationales de soins communautaires. *Regards, 58*(2), 191-197.
22. Mandeng, N. J., Ezzo, L., Nsangou, M., Tizi, N. B., Kenko, I., Ntone, R., ... & Mballa, G. A. E. (2024). From COVID-19 to Mpox, how can we engage communities in Cameroon?.
23. Vaughan, C., & Tuffrey, C. (2021). "Community health workers and local decision-making in Africa" Rôle des agents de santé communautaire dans la prise de décision au niveau local et souligne que la population se sent souvent plus influencée par les décisions communautaires que par celles prises au niveau national, ce qui favorise l'adhésion aux programmes de santé.
24. Sidonie D, Jocelyne E, Ngon A. Confiance aux institutions et rôle des réseaux sociaux numériques en contexte de coronavirus au Cameroun. 2020.
25. Kumar, R. et al. (2020). "Radio for Health: A Study of the Impact of Community Radio on Health Knowledge in Uganda". Impact des stations de radio communautaires sur les connaissances en matière de santé en Ouganda, soulignant leur rôle en tant que sources fiables d'information sur la santé pour les populations locales.
26. Omagor, J., & Agaba, A. (2021). "Trust in Health Information Sources among Rural Populations in Uganda: A Comparative Study". Confiance des populations rurales ougandaises dans différentes sources d'information en matière de santé, y compris la radio et les agents de santé communautaire, concluant que ces deux sont parmi les sources les plus fiables.
27. Hauge AO, Mackay K. Suivi et évaluation des résultats : leçons tirées en Ouganda. N°31053. Date de publication : 6 janvier 2005.
28. Street, R. L., & Gold, W. (2020). "Patient-Centered Communication in Cancer Care: Promoting Health Outcomes and Quality of Life." Comment les préférences en matière de communication varient selon le statut de santé des patients, affectant leur engagement avec différents canaux d'information.
29. Jean-Marie Charon. De la presse imprimée à la presse numérique. *Réseaux 2010/2 n° 160-161*.
30. Mutsvairo, B. (2016). "The Role of the Media in Public Health Communication: A Case Study of Zimbabwe". Dynamique entre la presse écrite et sa consommation par la population, révélant que malgré une forte représentation, la presse écrite n'est pas largement consommée en raison de divers facteurs socio-économiques.

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