Structuring a Communication Framework to Address the Challenges of Vulnerable Communities for Building Trust and Ensuring Access to Emergency Health Messages for Compliance during COVID-19

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Abstract

Pandemic health emergencies require timely awareness by credible information and trust in the operational system to inform, instruct, promote protective behaviour, and dismantle rumours to mitigate the impact, particularly in the absence of a vaccine during this current COVID-19 situation. Various government and non-government organizations generated an overwhelming number of communication materials (infodemic) for diverse populations around pandemic related practices. However, access to and utility of communication materials have been limited for the vulnerable populations due to social determinants of health such as linguistic or technology barriers as well as trust on communicated messages.

A systematic review was conducted in June-September of 2020 adopting a scoping review framework and PRISMA-ScR model. Collecting primary data from conveniently selected relevant service providers or policy planners during the COVID-19 pandemic followed this. Social determinants of health as social marginalization and health-related complexities were found to be associated with the vulnerability of the COVID-19 pandemic. Key factors that were identified as determinants included socio-cultural attributes, language barrier, lack of trust towards public health interventions, structural and personal factors, and lack of equity-informed planning of communication strategies.

The findings from the study informed the design of an equity-informed communication preparedness and strategy framework, which meant a participatory and inclusive process of planning and implementing emergency risk communication materials that aimed at reducing the barriers and in turn reducing the vulnerability of subgroups. The preparedness plan anticipates the limitations of the communication materials from an end-user perspective and reinforces the desirable practices for prevention. The strategy suggests a mode of communication for reaching out to people who are at risk to ensure increased efficacy and creating a support system to access information and act upon the recommendations. This 360-degree-approach framework emphasized the active participation of the target audience from the beginning of the process of communication material design for the pandemic.

Keywords: Infodemic; COVID-19; Vulnerable Community; Language Barrier; Accessible Communication

Introduction

The novel coronavirus pandemic (COVID-19), without a vaccine yet, has been menacing health around the globe with more than 9 million cases in almost 160 countries. The World Health Organization (WHO) confirmed more than one million deaths [1] due to COVID-19,

Structuring a Communication Framework to Address the Challenges of Vulnerable Communities for Building Trust and Ensuring Access to Emergency Health Messages for Compliance during COVID-19

08

which is increasing every day. We assume that certain subsections are disproportionately vulnerable and affected in such health emergencies. Dorn, Cooney and Sabin [2] and Martin [3] reported that during the current COVID-19 situation in the USA, disproportionate higher death rates were noted among the African American population with pre-existing systemic health inequalities. They are minority groups and constitute a major share of essential workers in retail, grocery stores, transit workers, and many other frontline positions and others such as farmworkers, who do not have capacities to "stay home" and fear of losing work makes them vulnerable in this pandemic situation. Additionally, immigrants and refugees experience the challenges of lack of health insurance, unavailability of medical services in rural areas and an existing medical condition adding the risk among these groups [4,5]. Similarly, in Canada, the impact of COVID-19 is also worst among immigrants, refugees and newcomers, who accounted for 43.5 percent of all COVID-19 cases in Ontario, despite they comprise just over 25 percent of the Ontario population [6]. Low rates of testing were also reported among immigrants and refugees compared to their Canadian-born counterparts. The percentage of positive testing was higher among immigrants, while refugees had the highest positive testing percent among all immigration categories (10.4% refugees Vs 7.6% other immigrants Vs 2.9% Canadian-born and long-term residents). Another major concern is the issue of 'infodemic' meaning "an overabundance of information, both online and offline. It includes accurate information as well as misinformation and false information" [7]. Such diverse sources and contents of information from different sources are influencing the trust of the residents to act upon those messages. Based on the assumptions of differential accessibility and trust of certain groups or communities to communication materials during this health emergency, this review aims at:

1. Exploring the communication resources available in Canada around COVID-19 targeted to different subsets of the vulnerable population.

2. Identifying the social determinants of health that impact accessing and practicing on communicated preventive measures.

3. Developing an equity-informed framework to enhance communication among the vulnerable population in such a novel pandemic.

Methodology

A systematic search and review approach [8] was adopted for reviewing the published articles and grey literature, in June-August of 2020, for generating ideas by adopting a scoping review framework [9] and the Preferred Reporting Items for Systematic Review and Meta-analysis for Scoping Review (PRISMA-ScR) model [10]. SU (co-author) screened published materials and charted ideas by repeated consultation with AA (author). Ryerson University Librarian was consulted for validating the appropriate databases (e.g. ProQuest, PubMed, Springer, and various government websites) and the most powerful Boolean search operators. Backward referrals were also included in the relevant studies.

Eligibility criteria

Considering COVID-19 as a novel pandemic, earlier publications around emergency risk communication on pandemics such as H1N1, influenza, and SARS were included in the review. Articles including communications during other public health emergencies were included, filtered through a component of a vulnerable population or marginalized group. Articles published in English and proactively talked about social and demographic variance impacting vulnerability during a pandemic were other inclusion criteria. Articles related to communication for vaccines and the HIV/AIDS epidemic was excluded.

Grey literature included websites of the Public Health Agency of Canada, Health Canada, The Canadian Red Cross, Federal Emergency Management Agency (FEMA), Immigration and citizenship Canada, Canada Emergency Response Benefit (CERB), OCASI, settlement agencies, and the WHO. In addition, a scan of news reports was done for COVID-19 related communications as well as the neighbourhood profiles for distribution of the diseases by different demographic attributes in Ontario, and challenges faced by stakeholders for providing services.

Structuring a Communication Framework to Address the Challenges of Vulnerable Communities for Building Trust and Ensuring Access to Emergency Health Messages for Compliance during COVID-19

09

After generating ideas from these reviews, five (selected purposively) relevant service providers and policy planners were consulted for collecting primary data around their experience while planning programs during the COVID-19 pandemic for vulnerable people including newcomer immigrants and refugees. Some of them were service providers, while others were policy planner or experts having insight into the utilization of available communication resources, their implementation and strategies to improve the access to resources and communication guidelines. Anecdotes from service providers were captured to provide narratives to the vulnerable situation of groups and communities during the pandemic. Permission was taken from the service providers while using their names and quotes as a part of validation from an ethical perspective.

Results and Discussion

Communication resources available in Canada during COVID-19 for different subsets of population

The Canadian government and many civil society organizations have prepared, and published communication materials related to CO-VID-19 outbreak awareness, symptoms, treatment updates, available financial support and prevention strategies. Canadian authorities, such as Public Health Officers, arrange frequent public briefings and share information through social media. There is also online assistance to talk to a representative to help with the query (Canada.ca/coronavirus). Toronto Public Health (TPH) has launched a COVID-19 Outreach Rapid Response Team (CORRT) to raise awareness about prevention, testing, capacity building of community agencies, and expanding residents' knowledge of local community resources. The interventions included a direct approach, adaptation for the specific needs of diverse resident groups and community organizations. It also entails collaboration with various organizations to promote test sites and COVID-related educational opportunities. As Canada has a pluralistic population translation services are also available at www.reo.network.online.ca which has a language repository for the materials in almost 120 languages. In order to update essential information, efforts have been made to create digital platforms and technical support for individuals to access information such as a QR Code on information documents that people can scan with their cell phone and then their language comes up on the phone. Access Alliance, a multicultural community health organization has developed a multilingual health library online accessible by all service providers and the public with the help of an app. Anyone can download the entire interface and navigate the library in their language.

Importance of information and critical health literacy

Pandemic health emergencies are chaotic and colossal that requires timely awareness by credible information, and confidence in the operational system to mitigate the impact [11]. Communication strategies are crucial in protecting public health during any pandemic by providing such resources to inform, instruct, promote protective behaviour, and dismantle rumours [12]. Communication of essential health messages for compliance, to prevent the spread of the disease, is very critical in the absence of a vaccine during this current CO-VID-19 situation. Overall, the government and various organizations generated a huge number of communication materials for diverse populations around pandemic related practices. Some communities experience an overwhelming number of communication materials, as an 'Infodemic', many of which are ethno-cultural myths without any scientific evidence. These communities are often vulnerable populations and groups with limited resources and capacities. Therefore, access to and utility of communication materials have been limited for such subsets of the population because of credibility on one side while linguistic or technology barriers in accessing these resources on the other. Pandemic communications ideally require people's participation and make them major stakeholders, who act as partners in the process of prevention, control and furthering resistance and recovery of the aftereffects of the pandemic. However, responses to any such information are affected by socioeconomic, cultural and health factors that affect the individual's capacity to interpret the information and act accordingly.

Structuring a Communication Framework to Address the Challenges of Vulnerable Communities for Building Trust and Ensuring Access to Emergency Health Messages for Compliance during COVID-19

10

Immigrants are among the most vulnerable yet experience major barriers to accessing and using health information

Communication materials and media are critical during a pandemic and are expected to reach everyone in the community. However, vulnerable peoples are at higher risk of experiencing communication gaps [12,13]. These gaps limit their capacity to cope and avail services to mitigate the impact of the pandemic. Determinants of such vulnerability are social marginalization or health-related complexities or a combination of both. The COVID-vulnerability can be interpreted as the likelihood of getting non-proportionally higher exposure to the infection and not-receiving adequate and timely medical assistance along with required information and social support to manage households and daily activities as mentioned in figure 1. Contributing factors for vulnerability are existing health discrepancies experienced by certain groups and populations such as new immigrants (someone who has been in the country for 5 years or less- Statistics Canada, 2006) and refugees (someone who is forced to flee from persecution and who is in Canada on humanitarian grounds- Canadian Council for refugees, 2010). Other determinants of vulnerability are poor living conditions, low educational level, and language barriers [12,14]. In one discourse, Mirza [15] mentioned, the challenges of refugee girls as, "For refugee and displaced girls, this is a triple crisis: the crisis of displacement, the COVID-19 pandemic and the risks they experience simply because they are young and female….we need to hear the voices and solutions of those impacted…".
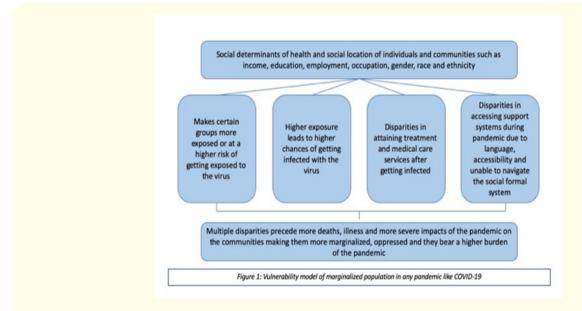

Figure 1: Vulnerability model of marginalized population in any pandemic like COVID-19.

Figure 1: *Vulnerability model of marginalized population in any pandemic like COVID-19.*

The social determinants of health, as vulnerabilities, that impact accessing and practicing on communicated preventive measures

The Toronto Star [16] highlighted that 16 hardest-hit neighbourhoods were in the northwest part of the city and south Scarborough. Some of the identifying characteristics of these neighbourhoods were higher rates of poverty, substandard housing, lower education, people mostly employed in the sector of sales, service, and manufacturing, such as personal support workers, cashiers, or work in grocery stores. These areas also have the most crowded public transport and people commute to their jobs even in COVID-19, as they cannot afford to stay at home. Similarly, Calla of Toronto Public Health issued an equity report focused distribution of COVID-19 prevalence in the city, which highlighted a higher share of COVID-19 among racialized communities [17]. The Black community constituted 9% of the city's

Structuring a Communication Framework to Address the Challenges of Vulnerable Communities for Building Trust and Ensuring Access to Emergency Health Messages for Compliance during COVID-19

11

population but accounts for 21% of the infection. Similarly, South-Asian or Indo- Caribbean population accounts for 20% of COVID-19 infection while representing only 13% of all population of the city. The white community shares 48% of the city population but only 17% of the infection. Household income was another indicator reflecting similar trends. More than one fourth (27%) of COVID-infection was reported among low-income households (CAD 0-29,000/year) while the higher-income households (CAD 150,000 and above/year) experienced a 6% infection rate. Achieving communication outcomes during a pandemic is critical, as it goes hand in hand with the daily needs of the people as simple as food, clothing, and medicine for chronic conditions. During pre-COVID-normal circumstances, communication and delivery systems took care of these supports, which are dismantled or delayed sometimes due to paucity of the funds and change of priorities during a pandemic.

Therefore, during any pandemic, the primary focus is to keep people safe and contain the outbreak. This would also mean starting from the right communication from preventive stage to post-infection medical care measures such as providing hospitals with supplies, access to care and medical help to vulnerable populations. Despite all efforts, novel communication challenges have been identified while providing services in pandemic situations:

- **Socio-cultural barriers:** Socio-cultural factors influence the receptivity of information during a pandemic. Social norms influence people's perception and their cultural beliefs [18]. Their social network is a coping mechanism to deal with the difficulties of life and stress. Preventive measures such as social distancing might appear to them as taking away their support system [12]. Customary rituals, obligations towards the community, and participation in their ethnic avenues are strong components of social life for people, which are conflicted in this pandemic [19]. Vulnerable groups are strongly dependent on their social ties rather than government initiatives, and anything in contrast to this theme is difficult to comprehend and implement by these groups.

- **Structural barriers:** Inequalities in any society, as a social determinant of health, restrict vulnerable people to practice preventive measures such as social distancing, accessing medical care and other support services rendering higher infection rates among certain sub-groups and reduced capacities to mitigate the impact of the pandemic. In addition, measures such as social distancing, hand washing, wearing protective equipment such as masks and gloves may appear simple but can be challenging to procure for some groups. There have been reported cases of hoarding and hiked pricing of protective gear such as gloves and masks which became a financial burden to these groups who were already economically marginalized [20]. Besides this, isolation and quarantine facilities for people with COVID-19 could be triggering. Employment engagements, economic insecurity, social safety, behaviour seeking health care, access to medical and supportive care, impact vulnerable communities disproportionately. Poor, crowded and sub-standard housing, old buildings and poor maintenance could be other challenges as well [21-23].

- **Language barrier and literacy level:** An appropriate accessible message is very important to disseminate information for compliance by communities. Diversity of the audience regarding language, social media use and culture shapes the comprehension of communicated messages [18]. Subgroups of the population in Canada, whose first language is not French or English, or if materials are not provided in multiple languages (their language), face difficulties in understanding information [24] and practice it. Similar challenges remain around the accessibility of owning a phone, internet, spoken language, and level of health literacy among different groups of people. To access online and toll-free information helpline support available in English and French create barriers for those who are not fluent in the official languages.

- **Technical barriers related to the medium of communication:** The medium of communication implies the audience like to access information tailored to their needs and capacities in terms of language and culturally sensitive presentation of the materials [25-27]. Some authors have argued that websites do not demonstrate motivational construction to encourage positive behaviours based on grounded theories and information [28,29]. To have access to online materials people require an appropriate device and adequate data plan. There is also an issue of the literacy of vulnerable subsets of the population around

Structuring a Communication Framework to Address the Challenges of Vulnerable Communities for Building Trust and Ensuring Access to Emergency Health Messages for Compliance during COVID-19

12

their comfort for using those technologies and using digital platforms to access information (Digital Divide). In addition, social media is used extensively to disseminate information about COVID-19, it is also a conduit for propagating misinformation; as a platform of knowledge mobilization it always bears a risk of standing, where no credibility check of the information is done if it is not coming from an authentic source. This can lead to misinformation, rumours and faulty practices that adversely affects the management and health outcomes in the pandemic.

- **The credibility of the information:** Another challenge in COVID-situation is constantly changing information, which requires to be updated on all forums accordingly. Sometimes, there might be a lapse or delay in updating information on various platforms, which creates confusion and distrust among communities. For example, in March 2020, masks were largely recommended only for healthcare providers. In April, it became mandatory for the public [30]. There is still news saying healthy people do not need masks or masks should be used where social distancing cannot be practiced. These changes are critical and need to be provided in time adequately. Sometimes the request changes can be confusing and adversely affect the safe behaviours as well.

- **Lack of trust towards public health interventions:** Trust and credibility of the source providing the message is crucial for compliance in public health emergencies [31,32]. Lack of empathy, care, services, and openness can create distrust among people towards messages and measures during pandemics [33]. People may feel suspicious of the government efforts on various accounts such as multiple sources of contradictory information, delayed decision-making, and political strife related to subpopulations. For COVID-19, in the absence of any preventive vaccine or specific medicine, health promotion and prevention through non-pharmaceutical intervention is the best possible chance in the pandemic, which requires trust in the health information system, communication, and practice [12]. This comprises dimensions such as social distancing, use of PPE, monitoring symptoms, early reporting and isolation or quarantine when necessary [19,34]. However, to practice preventive measures, as communicated by government agencies with limited support systems, is challenging for vulnerable groups, because usually vulnerable populations do not have a very strong and trusted relationship with government(s). Additionally, the history of oppression, colonialism, and racism in Canada is not acclaimed in favouring vulnerable groups, which might make people suspicious, resulting in a lack of trust in the system [18]. For example, quarantine may create discomfort among people away from their families and might be triggering for some groups such as refugees.

Equity-informed framework to enhance communication among vulnerable populations in such a novel pandemic

It is important to acknowledge that in a systematically unequal society, an equal approach disproportionately affects people who are marginalized by worsening and perpetuating existing disparities [35]. Gostin stated in the context of emergencies that "ostensibly neutral pleas for people to stay home, or stock up on necessities, are meaningless for the poor or homeless- as we saw during the Gulf Coast hurricanes when the poor and vulnerable lacked the means to follow public health advice to "evacuate" or "shelter in place" (p-3)" [36]. Existing forms of resource deprivation, social inequalities and exclusion are variable risks during a pandemic. However, most of the time these structural inequalities are overlooked, and risk is perceived more as lifestyle choices [37]. The disadvantaged groups bear a greater onus of any sickness and it is correlated to poverty, gender, race, ethnicity and social status as well. Nutrition quality, dependency on public transportation, an existing association within a society such as immigrants and refugees being treated outsiders and resources available to mitigate stress of daily life are intricate factors affecting access to information and implementing it [35].

The World Health Organization also suggested an equity approach framework to prioritize such vulnerable populations for access to resources [38]. Creating a framework for information sharing and dissemination, after analyzing these barriers, is an important strategy during the COVID-19 pandemic to contain the outbreak and mitigate the impact. The United Nations released a framework document "COVID-19 and Human Rights: we are all in this together" highlighting the vulnerability of groups in the pandemic and importance of an

Structuring a Communication Framework to Address the Challenges of Vulnerable Communities for Building Trust and Ensuring Access to Emergency Health Messages for Compliance during COVID-19

13

inclusive and participatory approach for mitigation and recovery from COVID-19 [39]. A similar strategy was recommended by representatives of community organizations delivering services to vulnerable groups, where they highlighted the need for coordination, merging resources and trusted leadership to make the communication process more efficient and effective as mentioned by Manager, Business Development - Language Services, Access Alliance, Toronto.. "the system has limited resources for [translating] information [into non-official] languages so why don't we pull together and say, here's our core shared messaging [...], then let's determine as a group what are the top non-English, non-French languages that we need to put information out there".

Based on the above-mentioned evidence and anecdotes a communication preparedness and strategy framework have been developed on the principles of equitable participation and inclusiveness (Table 1). It suggests the process of planning and implementing emergency risk communication and considerations around communication to reduce the barriers and in turn reducing vulnerability of subgroups. This framework locates the process of initiating communication for pandemic and ensuring participation of the target audience as key factors for effective communication strategy from the starting phase and situations of a pandemic for preparedness.

Strategy	Description
1. Assessment of the phase of the pandemic for communication	This would include time, space, and the wave of the epidemic, which means timely providing of adequate information for the prevention, treatment, and support to cope with the pandemic situation. The message needs to be inclusive and accessible to be understood by the target audience who are at high risk. Delayed, partial or incomplete messages create panic and distrust among people. Therefore, assessment of who to reach, how to reach and what to be communicated at what stage are important considerations for a risk communication process.
2. Ongoing communication strategy	Communication during a pandemic need to be consistent and continuous for re-enforcing the right information. Agencies and social institutions, which are interacting directly with vulnerable people, are platforms for ongoing communication. These include schools, workplaces, service providers and religious organizations, which work as support systems for people at high risk. In a pandemic situation, communication items may change rapidly; therefore, agencies and social institutions can play a vital role to reach vulnerable communities in such a fast-paced variance situation.
3. Medium of communication	Choosing the right medium for communication with vulnerable people is strategic during a pandemic. There are multiple channels of communication such as print, social media, broadcasting but they are not accessible equally by everyone. There is also a question of the credibility of the information in open space. Thus, multiple channels of communication can be used in combination to disseminate consistent and accurate information. This can avoid overload of information by making it simple, available in multiple languages, using infographics, issue-based and culturally suited for the diverse population.
4. People's Participation	The effectiveness of any communication strategy is determined by the level of participation of the target population. Participation links empower and build the trust of the people in the system. Such a participatory approach helps in identifying trusted community leaders and resources to be used effectively for emergency risk communication. Social relationships and connections build social and emotional resilience for vulnerable communities to cope with the pandemic and practice safe behaviour.

Table 1: *Communication preparedness and strategy framework.*

Conclusion

Pandemic health emergencies are chaotic and colossal requiring credible correct information, awareness, and confidence in the operational system to mitigate the impact of pandemic [11]. Therefore, communication strategies are crucial in preventing public health in any pandemic. Current communication strategies for COVID-19 reflect a comprehensive approach to reach out to most people. However, there is an indication that subsets of people are left out in the process of emergency risk communication making them vulnerable to the

Structuring a Communication Framework to Address the Challenges of Vulnerable Communities for Building Trust and Ensuring Access to Emergency Health Messages for Compliance during COVID-19

14

emergency. In addition, social determinants of health contribute to health inequalities and in turn affect the accessibility, reception and comprehension of the information provided during health emergencies.

Socio-cultural characteristics, lack of proficiency in either of the official languages, lack of trust towards public health interventions, and lack of equity in communication approach are some of the barriers to effective communication during public health emergencies. Besides these, personal factors also restrict the communication to be comprehended and followed by vulnerable subgroups. With government and civil society taking multiple efforts to reach out to a diverse population, they face challenges around adequate availability of communication resources on one hand and technological hitches with an overload of information on the other. Navigating such information with limited language and digital skills turns out to be challenging for service users in general to seek information. Therefore, a communication preparedness and strategy framework have been developed to make the communication process more effective, appropriate and inclusive to reach out to large and diverse audiences.

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Structuring a Communication Framework to Address the Challenges of Vulnerable Communities for Building Trust and Ensuring Access to Emergency Health Messages for Compliance during COVID-19

15

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Structuring a Communication Framework to Address the Challenges of Vulnerable Communities for Building Trust and Ensuring Access to Emergency Health Messages for Compliance during COVID-19

16

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