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COMMENTARY

Fighting the Coronavirus disease (Covid-19) pandemic: Employing lessons from the Ebola virus disease response



Lutte contre la pandémie de maladie à coronavirus (Covid-19) : tirer les leçons de la réponse à la maladie du virus Ebola

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Summary Coronavirus disease (COVID-19) is caused by a beta-coronavirus (SARS-CoV-2) that affects the lower respiratory tract and appears as pneumonia in humans. COVID-19 became apparent in December 2019 in Wuhan City of China, and has propagated profusely globally. Despite stringent global quarantine and containment drives, the incidence of COVID-19 keeps soaring high. Measures to minimize human-to-human transmission have been implemented to control the pandemic. However, special efforts to reduce transmission via efficient public health communications and dissemination of risks should be applied in susceptible populations including children, health care providers, and the elderly. In response to this global pandemic, this article summarizes proven strategies that could be employed to combat the COVID-19 disease outbreak, taking a cue from lessons learned from the Ebola virus disease response.

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MOTS CLÉS

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Résumé La maladie à coronavirus (COVID-19) est causée par un bêta-coronavirus (SARS-CoV-2) qui affecte les voies respiratoires inférieures et se présente sous forme de pneumonie chez l'homme. La COVID-19 est apparue en décembre 2019 dans la ville chinoise de Wuhan, et s'est propagée à grande échelle dans le monde entier. Malgré des mesures de quarantaine et de confinement rigoureuses, l'incidence de COVID-19 continue de grimper en flèche. Des mesures visant à minimiser la transmission interhumaine ont été mises en œuvre pour contrôler la pandémie. Toutefois, des efforts particuliers pour réduire la transmission par le biais de communications efficaces en matière de santé publique et de diffusion des risques doivent être déployés dans les populations sensibles, notamment les enfants, les prestataires de soins de santé et les personnes âgées. En réponse à cette pandémie mondiale, cet article résume les stratégies éprouvées qui pourraient être employées pour combattre l'épidémie de maladie COVID-19, en s'inspirant des leçons tirées de la réponse à la maladie du virus Ebola.

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Introduction

The outbreak of coronavirus disease 2019 (COVID-19) caused by the 2019 novel coronavirus (SARS-CoV-2) was first reported on 30th December 2019 in the Chinese city of Wuhan in Hubei Province [1]. The disease is a respiratory infection caused by a new strain of coronavirus belonging to the same family as SARS-CoV and MERS-CoV [2]. The virus is widely known to be transmitted through person-to-person, symptomatic, and asymptomatic individuals. The common symptoms of an infected individual include coughing, sneezing, fever, difficulty in breathing amongst others [3].

The disease has spread widely and rapidly from China to almost all the continents of the world, such that many countries have closed their territorial borders or/and banned travels to or from countries with reported cases. The World Health Organization (WHO) first declared it a public health emergency on 30th January 2020 and asked all countries to prepare adequately for it. As of 19th June 2020, reports from affected countries show that there is a total of 8,519,543 confirmed cases and 454,582 deaths from the coronavirus disease [4]. The first reported case of the disease in Africa was on 14th February 2020 in Egypt [5], and as of 19th June 2020, all the 54 African countries have reported a total of 275,327 confirmed cases and 7395 deaths [6]. A study modeling the spread of the disease puts African countries between moderate to high risk [7]. Regrettably, most African nations are known to have weak healthcare infrastructures [8–10], which makes the findings of that study fearful. This is evidenced by the dearth of capacity to diagnose the coronavirus and availability of suitable quarantine facilities [11,12].

At the initial outbreak of the disease, only two laboratories in Africa (one in Senegal and one in South Africa) could test for the virus [13,14], however, presently, the majority of the countries are reported to have testing capacities. Even with this remarkable development, these testing facilities are grossly insufficient to cater to the large populations [8,11], as these facilities are located distances away and not within easy reach of a greater percentage of the populace. This situation has created fears about the capacity of developing nations to adequately and efficiently respond to this

outbreak [8–12]. However, during the last Ebola outbreak in West Africa in December 2013, which originated from Guinea, many countries in the region could not deal with the emergency [15,16]. With the experience from the Ebola response, lessons from it could be valuable in combating the current coronavirus disease outbreak, which is spreading rapidly globally.

Risk communication

The first line of action from the Ebola disease was risk communication. With no specific treatment for the coronavirus disease, prevention is the most immediate and valuable action and has proven to help contain the spread of the disease [8,11,17]. Citizens must be well informed and sensitized on all aspects of the disease, particularly its prevention [8,9,11]. This would help in tackling myths and misinformation as well as improve health-seeking behavior [18–20]. This measure will in no small way slow down the infection rates; and where individuals show any symptoms, such individuals will quickly seek healthcare or would be promptly reported to health officials for quarantine and subsequent treatment. Additionally, individuals who have contact with a suspected case will avail themselves of testing and monitoring. Contact tracing will be greatly enhanced, as people would volunteer information instead of hiding and further increasing the spread.

Training of healthcare workers

Intensive training of healthcare workers at primary, secondary and tertiary health facilities as was the case during the Ebola outbreak could be a very useful means of curtailing the spread of COVID-19 [8,9,11,12]. This is important and necessary, as caregivers themselves are not exempted from misinformation during disease outbreaks [21]. A study suggests that the ill preparation of healthcare workers reduces their willingness to attend to suspected cases of infections during such outbreaks [22]. For example, if the healthcare workers at the primary healthcare centers are adequately

trained, it will enhance the referral system and curtail spread within their communities. Since these centers are nearest to the people, they are more likely to report any observed symptoms seen in their workplace. Furthermore, this would prevent the spread of the disease within health facilities, as was the case at Daenam Hospital in Cheongdo in South Korea. Healthcare workers will be able to protect themselves against contracting the virus as they are a critical resource and play a pivotal role in combating its spread [11,12]. This is more so important to the overall response processes as infections of healthcare workers will greatly reduce manpower [23].

Provision of infrastructure and safety equipment

Provision of infrastructure and safety equipment such as quarantine facilities and kits will go a long way in supporting the fight against this disease. A study highlighted the critical role played by the polio program infrastructure during the Ebola virus outbreak [24]. As noted earlier, many of the developing countries lack adequate health infrastructure [8–12]. Patients with infections from the virus cannot be hospitalized in the same healthcare facility with patients admitted for other ailments; hence, the need for separate facilities for isolation and treatment. At the height of the outbreak, the Chinese healthcare facilities in the affected regions were overwhelmed by the large numbers of infected persons, which occasioned the rapid construction of the 1000-bed capacity Wuhan Huoshenshan Hospital within ten days. The provision of safety equipment such as Hazmat suits is necessary for combating the spread.

Social mobilization and community engagement

The community-based strategy of social mobilization and community engagement was highly effective in case detection of the Ebola virus, thereby reducing the extent of transmission in a country with a weak health system [25]. The experience gained from community mobilization in reducing the Ebola transmission in low resource settings has the potential of being helpful for the global community in the fight against the COVID-19 [25]. Overall, effective communication, community, and social engagement must be formally placed at the core of the response in public health emergencies and given a good budget [11,26].

The collective engagement of all stakeholders including community, traditional and religious leaders, organizations, and the private sector helped immensely in combating the Ebola virus outbreak. Following their engagement, practices, rituals, or festivities and related practices with the potential to increase the spread of Ebola virus were discontinued. A classic example of such a ban on certain events includes funeral rites of deceased individuals. A case in point is the Shincheonji Church of Jesus owned by the Daegu religious sect and based in the fourth largest city in South Korea, which became an epicenter of the spread of the coronavirus disease following a religious gathering held at the peak of

the outbreak. Prompt engagement of all groups will ensure that such gathering is either put on hold or out rightly canceled. These measures will limit the rate of infection to a number that can be easily managed by authorities and in the long run, reduce the mortality rate of the disease.

Conclusions

As multicultural societies, most affected countries present a distinct set of challenges for successful risk communication. Findings have shown that public health communication and dissemination of risks associated with COVID-19 are not optimal in low- and middle-income countries. It is therefore recommended that public health education about COVID-19 and other infectious disease outbreaks should be targeted more to the younger population, low- and middle-income class, lower educated individuals and ethnic minorities, to provide them with better information on preventive measures. Reliable facts also suggest that traditional media channels and outlets like television, radio, websites, and print media are arguably the main sources of outbreak information despite the growing trend of social media. Succeeding health communication schemes should study audience sectionalization and the most appropriate media channels for sending risk information across several sociodemographic groups.

Going forward, the study suggests that a cooperative effort be organized between the media and concerned healthcare authorities, to smoothly communicate information through several effective media about unique preventive measures the public can take to ensure their protection during outbreaks. Researches should be carried out to unravel how local communities interact and the possible factors that can hinder or facilitate people to act during the emergence of an outbreak. Further studies can be geared towards examining the effectualness of oriented messages. These strategies will in no small measure benefit the purpose and plan of health communications during infectious disease outbreaks, especially at the early phases of development.

Authors' contributions

O.I.O. and T.C. conceptualized and designed the study. T.C. drafted the first manuscript. O.I.O. reviewed the final manuscript for intellectual content. All authors are responsible for the integrity of the work.

Disclosure of interest

The authors declare that they have no competing interest.

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