

Curbing the Spread of COVID-19 Pandemic Caused by SARS-CoV-2: Considering Psychological, Socio-Legal and Ethical Implications on Preventive Measures in Cameroon

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Abstract

The emergence of human to human novel Coronavirus disease (COVID-19) in Wuhan, China rapidly became a global pandemic and it ultimately lead towards medical, legal and ethical concerns which need to be addressed. As compared to current zoonotic infections, the spread of COVID-19 is exceptional; with higher severity as well as more confirmed mortality. The mode of transmission is primarily through respiratory droplets with incubation times (1 – 14 days) which is quite similar to severe acute respiratory syndrome coronavirus (SARS-CoV-1). Reports show that it has claimed more lives as compared to the Middle East respiratory syndrome coronavirus (MERS-CoV). Till now, it is difficult to present a clear conclusive information about the prevention as well as the spread of this viral infection and therefore no clear cut treatment guidelines are available. Hence, it is difficult to project how to live with this viral infection, the Government of many countries including Cameroon have provided some public health measures to help in the reduction of its spread.

These measures include amongst others; isolation, quarantine, social distancing, regular washing of hands with soap, use of hand sanitizers, staying and working from home and obligatory wearing of masks in public places. Proper implementation of these measures require relevant and effective communication as well as sensitization projects to be put in place to abreast the community and individuals to comply with the procedures. It is the inherent role of the Government of Cameroon to ensure that adequate supplies of essential needs (masks, clean water, soap, hand sanitizers) are available for the vulnerable and underprivileged members of society during this health crisis.

Here, we are going to explore the psychological, socio-economic, and ethico-legal concerns of this pandemic, through its implementation of isolation, quarantine, social distancing, constant washing of hands with soap, use of hand sanitizers, staying and working from home, obligatory wearing of masks in public places and national lockdown. The implication of these measures on the life of the population in a low middle income country like Cameroon has been elucidated.

Keywords: COVID-19; Ethical; Psychological; Cameroon; Social Distancing

Background

The novel Coronavirus (nCoV) also known as COVID-19, was first identified in Wuhan, the capital of Hubei Province in China, on December 31, 2019, where a cluster of patients were diagnosed with a strange type of pneumonia (1–3). Severe acute respiratory syndrome Coronavirus 2 (SARS-CoV-2) was identified as the causative agent of this viral infection. Similar to the Middle East respiratory syndrome Coronavirus (MERS-CoV) and severe acute respiratory syndrome Coronavirus 1 (SARS-CoV-1), infected patients exhibited viral pneumonia like symptoms such as fever, cough, shortness of breath and breathing difficulties (1,3,4). In severe cases, it can cause pneumonia, severe acute respiratory syndrome, kidney failure, cardiovascular complications and ultimately lead towards death. It propagates rapidly and soon required worldwide attention. On January 30 2020, the World Health Organisation (WHO) declared the outbreak of a Public Health Emergency of International Concern (PHEIC) (2,5). In just few months later on March 11, 2020, the epidemic has rapidly and widely evolved and WHO declared this outbreak as a pandemic. Today, this is considered to be new and big global health threat involving more than 200 countries (2,6).

Outside China, the predominant threat was reported in many countries headed by the United States of America

(USA), Spain, Italy, France, Germany, United Kingdom (UK), Brazil and Turkey. The total number of confirmed cases are more than 10 million with around 0.5 million deaths and more than 5.4 million recovered cases all over the world (7). Elderly patients (above 60 years) and those with commonalities such as cardiovascular, renal, pulmonary, immune deficiency and diabetes are at higher risk (5,8). Global and local strategies have been rapidly put in place to tackle this disease. The most recommended preventive measures are physical distancing, appropriate hand washing and the use of face mask as well as confinement measures (9,10). There is no conventional preventive or curative treatment for infected patients, although there are several ongoing clinical trials being conducted worldwide. Diagnostic strategies are actively being developed, some already in use, but still to be improved to make it more specific and efficient. The immune system is known to play a critical role in the physiopathology of this viral infection (11). The potential impact of this viral infection on our healthcare facilities and the vulnerable population might be disastrous if not appropriately managed, as seen in many countries such as Italy, France, Spain, China, Brazil and USA (8,9). Effective public health control measures, such as social distancing, mandatory quarantine, closing of schools and the

wearing of protective mask and a total closure of our borders could help curb and prevent the rapid spread and / or break the chain of transmission among cities in Cameroon (8). Regardless of these public health preventive measures, the psychological, socio-legal and ethical implications of these guidelines are not clearly defined. The implementation of these measures are of huge ethical concern as it allures to the rights to protect the health of the citizens compared to individual rights, individual freedom of movement and the right to privacy (1,4,5). Human rights protect an individual's right to dignity and autonomy as well as the ability to make informed decisions. These rights in most cases conflict with the Government's responsibilities to protect the public's health interest (3,6).

Our Concern for Cameroon

To date, Cameroon has over 12 thousand confirmed cases, about 10 thousand recovered and more than 300 deaths (12). It is considered as one of the highest hit infected countries in Sub Saharan Africa and ranked 3rd after South Africa and Nigeria (10). Most of these cases are linked to individuals who have travelled abroad and were exposed to contact persons (13,14). Cameroon, as compared to other developed countries, has limited health care facilities, trained health staff, inadequate laboratory capacities and limited financial resources. This could hamper the management of the pandemic (14–16).

The COVID-19 positive cases in Cameroon is also of great concern due to the high rate of people living with other comorbidities like HIV, diabetes, and other poverty-related diseases such as malaria and *Mycobacterium tuberculosis* (10,17–19). The socio-economic gap between the rich and the poor is one of the challenges facing the country's pre-pandemic. According to WHO, the high mortality rate is mostly seen in immunosuppressed persons, such as the elderly, individuals living with communicable diseases or non-communicable diseases (20). With waves of

transmission in multiple countries, the WHO declared the outbreak as a "Pandemic" – as nations and the international community began to confront the spread of this viral infection; thus, a host of ethical and legal issues had begun to surface (21–23).

As the government of Cameroon struggle to contain the COVID-19 pandemic, certain public health measures were put in place in the interest of its citizens. These include the closing of national borders, airspace and seaports, schools, colleges and universities, restricting public gatherings of more than fifty people, regular washing of hands, quarantine and Isolation. Citizens were advised to stay indoors, maintain social distancing, self-isolation, quarantine and the compulsory wearing of protective mask. Most countries implemented similar guidelines, but differed in severity (24,25).

Psychological Effects

The psychological effect of these measures can't be ignored and should be adequately weighed against the benefits. This psychological as well as mental distress can clearly be felt and seen on; healthcare workers, the elderly, people with pre-existing health conditions, precarious domestic conditions, those without access to water and hand sanitizers, as well as those in fragile humanitarian conditions and within conflict settings. The panic and fear from this group should not be underestimated. Family members of a deceased patient live in constant fear and depression. The mental health needs of infected individuals and their immediate affected family members should be taken seriously. Most families with victims are stigmatized and can become restless, hopeless, stressed and panic stricken (26,27).

The government of Cameroon is proposing three measures to combat this psychological and mental health situation; 1) the creation of psychological counselling units for health personnel; 2) strengthening the emergency call back communication system and 3) combating fear to better lead the fight through efficient measures

(8,23,28). These recommendations from the government fall short of expectation. It is therefore urgent to adopt the policy brief of the United Nations (UN) and proposals of the WHO on the psychological support to the group of people mentioned above. Successful implementation of these public health measures requires us to reduce the negative psychological effect and its potential damage on humanity. In this article, we focus on the ethics setbacks of the pandemic, the application of quarantine, social distancing, wearing of masks, travel band and national partial lockdown in the Cameroonian context. We aim to define these measures and explain the benefits, limitations and ethical issues relating to this pandemic and the WHO response towards it (4,8,29).

Ethical Concerns

In response to a pandemic, containment strategies always create tension between the state and its citizens. The beneficence principle is one of the basic ethical principles that can be applied to individuals and their communities. In principle, the concept of beneficence is considered to mean “the act of doing good, the active promotion of good, kindness and charity” *also known as* the act of providing benefits, balancing benefits and harms (13,15,16).

The imposing of mandatory isolation, quarantine and national lockdown would be ethically justified as these measures would protect the greater number of citizens. In the face of a pandemic, mandatory quarantine would be beneficial to prevent a public health disaster, in the sense that it reduces the risk of being infected and transmitting the infections onwards. In contrast, the individuals who undergo mandatory quarantine risk losing their livelihoods (loss of income) and the ability to provide for their dependents (30). One could also argue that mandatory quarantine violates fundamental human rights to freedom of movement as adumbrated by Article 13 of the UN charter of human rights and is therefore unethical. Autonomy is a basic,

but critical, ethical principle that applies to every individual, which is the ability to make an informed decision otherwise known as self-governing (20,26,31). In contention with autonomy is paternalism, which is the ability to decide for another person. Imposing mandatory quarantine should be exercised in a structured approach that respects autonomy. Failure to exercise mandatory quarantine without consent would disregard an individual's autonomy right in decision making and would imply paternalistic; which is the restriction of the freedom and responsibilities of subordinates or dependants in their supposed interest (13).

Implications of Some of These Measures Mandatory Quarantine

In a public health emergency, individual/citizen rights must be set aside for the greater good of the public health. Cameroon in furtherance of implementation of dispositions taken by local legislation in accordance with section 260 of the Cameroonian Penal code, entitled “Infectious diseases”, punishes whosoever by his conduct, facilitates the communication of any dangerous infectious disease with imprisonment for from three (3) months to three (3) years (1,4). The government is currently using these principles to curb the spread, as they have implemented a national partial lockdown and instructed the public to adhere by practising social distancing, self-isolation and self-quarantine for the greater good of the community (20). Implementation of these measures will benefit the public health and reduce local transmission of the disease, which would mean less stress on vital health care resources to provide fairness in the health care service. As the rate of transmission increases, so does the potential impact of the disease (32). The impact of this life-threatening disease should be carefully observed; the number of confirmed positive patients, the severity of each confirmed case, and the potential strain on the health care facilities would be critical in determining how stringent the

mandatory quarantine measures should be implemented (25).

Ethically, mandatory quarantine can harm individuals. As previously mentioned, quarantine has economic implications. In Cameroon, to encourage mandatory quarantine several bans have been placed on 'non-essential services. These bans already incited panic for individuals that are employed across these services. For instance, waiters, domestic workers and many in the informal industry can't do their job from home. Some jobs don't provide paid sick leave (26,33). Individuals that are employed across the informal sectors are more vulnerable to mandatory quarantine because they can be financially harmed and unable to provide for their essential basic needs (32). Public transportation restrictions might limit their freedom of movement, which is a violation of a fundamental human right. The informal sector in Cameroon is on a free fall as an average Cameroonian lives on less than a dollar per day. Sex workers are greatly affected as they are kept out of work (8).

Quarantine and Isolation

Self-quarantine has been recommended by WHO and several other countries health department for those who have been exposed to patients infected with this pandemic, or perhaps experiencing mild symptoms, as a measure to reduce pressure on in-demand resources, saving them for patients that required the resource the most (2,4,5). In other words, self-quarantine is a measure towards "flattening the curve". Effective management of essential healthcare resources is essential during a pandemic, because a self-quarantined individual is less likely to become ill enough to require care, transmit the virus unknowingly and contribute to an overburdened healthcare system (21).

Isolation and quarantine are the two trusted methods used to prevent transmission. Multiple countries have explored these two options to prevent the spread, thus underscore the tension between freedom of movement and the protection of the general population (9).

Isolation and quarantine are often used interchangeably however, these words have two different meanings in the public health context. On the one hand, isolation refers to the separation of confirmed infected individuals to prevent or reduce the rate of transmission. Quarantine refers to the restriction of a "healthy individual" that have had contact with the communicable disease to prevent transmission during the incubation period should they have been infected (9,10,29). China conducted one of the largest mass quarantines in history when an estimate of 50 – 60 million people in multiple cities, were quarantined as one of the earliest COVID-19 control intervention (13,27,31). Quarantine is a non-pharmacological control measure that comes at a high cost – which includes travel restrictions, cancellation of public events and mass gatherings. Several countries, such as USA, UK, France, New Zealand, South Africa and many more have issued travel bans to protect their citizens (20). An outright entry ban on people from Hubei, China and cancelling of commercial flights have minimized travel to affected areas due to fear of transmission (34). During the 2003 SARS outbreak, Canada and China imposed citywide quarantine whereas the Ebola outbreak also caused entire villages in West African countries to be quarantined (25).

In Cameroon, the most obvious socio-economic disparity is seen in the rural areas. These settlements are often located far from the main cities. They have more health challenges in terms of inadequate service delivery and substantial infrastructure (8). Some rural settlements have inadequate clean water supply and have shared bathrooms located outside their informal habitation. Public health measures, such as basic hand hygiene, self-isolation and quarantine, would be considered as luxuries for the inhabitants of these settlements (17). Achieving adequate contact tracing and social distancing would be close to impossible due to the geographic set-up in these villages (14).

With fear of a new recession and financial collapse, times like these call for

resilient and strong leadership in healthcare, business, government and wider society. Immediate relief measures need to be implemented and adjusted for those that may be vulnerable to these restriction measures. Medium and long-term planning is needed to re-balance and re-energise the economy following this crisis (22). A broad socioeconomic development plan including sector by sector plans and an ecosystem that encourages entrepreneurship is also needed so that those with robust and sustainable business models can flourish. It is prudent that the government and financial institutions re-assess and re-evaluate the economic consequences of the restriction measures (35).

Quarantine and isolation have caused total slowdown of academic activities. Despite the fact that measures have now been relaxed and schools reopened, social distancing is still an issue because not all the student are allowed to go back to school (13). Priority has been given to students in examination classes. However, the restrictive measures have motivated Cameroonians to explore other modern IT facilities (WhatsApp, zoom, discord and skype, etc.) to teach, which were under exploited before COVID-19.

Wearing of Protective Masks

There are two well-accepted routes for the spread; Droplet spread, droplets sprayed into the air when an infected person coughs, talks or sneezes. Contaminated surfaces where virus has landed. People can pick the virus up on their hands and then touch their eyes, nose or mouth (36). To prevent the spread of the virus, some countries like Cameroon have made it compulsory to wear face mask in all spaces opened to the public. The USA public health institute, Centre for Disease Control and Prevention (CDC), is recommending that even healthy people wear masks or some kind of clean mouth and nose covering when leaving their homes. Personal protective equipment (PPE) is crucial for clinicians or other workers who may be exposed to it so that they are able to carry out their work activities efficiently.

However, many countries, including Cameroon, are experiencing shortage of the necessary PPE (21).

The WHO recommends that only people who are sick and showing symptoms or caring for people who may have COVID-19 should be wearing protective masks. This is probably recommended so that the limited supply of masks can be prioritized for healthcare workers. To meet up with the demand, the government of Cameroon has put in place local production of masks by competent national institutions under the supervision of the Minister of Scientific Research in collaboration with the Ministry of Public Health (8). The local production of face masks have improved the likelihood of Cameroonians to get more income from the sales of same. The use of cotton cloth masks as an alternative to medical masks is not considered appropriate for protection from coronavirus. However, the compulsory wearing of masks by everybody, woefully fails to take into consideration asthmatic patients and other patients who suffer from breathing problems which are of great concern. The wearing of masks may likely shorten their oxygen intake and suffocate them. This may lead to further untold circumstances. It is a gross violation of their human rights as enshrined both in the UN charter of human rights and the preamble of the Cameroonian Constitution, which is part and parcel of its constitution. The right to life is a fundamental one as well as the right to a standard of living adequate for the health and well-being of every one. This is elucidated in articles 3 and 25 of the UN charter as well as the preamble of the Cameroonian Constitution of January 18, 1996 (8). Some school of thoughts say that wearing a mask is reducing their intake of oxygen or forcing them to breathe in their own carbon dioxide. This leaves them feeling faint, light-headed, or "smothered". They're also concerned about how dangerous this is, and how less oxygen and more carbon dioxide might affect their health. In rare cases, it can actually be pretty dangerous, according to the National Institute of Health (NIH) (26). It is alleged that inhaling high levels of carbon dioxide

(CO₂) may be life-threatening. Hypercapnia (carbon dioxide toxicity) can also cause headache, vertigo, double vision, inability to concentrate, tinnitus (hearing a noise, like a ringing or buzzing, that's not caused by an outside source), seizures, or suffocation due to displacement of air (37). But the emphasis here should be on *high levels*. "It has to be a pretty high concentration to be capable of causing harm," Bill Carroll, an adjunct professor of chemistry at Indiana University, Bloomington, tells *Health*. "CO₂ is present in the atmosphere at a level of about 0.04% (21). It is dangerous in an atmosphere when it is greater than about 10%". A representative from US CDC told Reuters "CO₂ will slowly build up in the mask over time". However, the level of CO₂ likely to build up in the mask is mostly tolerable to people exposed to it. You might get a headache but you most likely not suffer the symptoms observed at much higher levels of CO₂. The mask can become uncomfortable for a variety of reasons including a sensitivity to CO₂ and the person will be motivated to remove the mask (36). It is unlikely that wearing a mask will cause hypercapnia". The claim does not say if hypercapnia will affect health workers or the general public. For the general public, increased CO₂ due to the wearing of masks would be less likely to cause complications like hypercapnia than to a health worker, who wear masks for longer stints (34,35,38,39).

Social Distancing

'Social distancing' is an alternative measure to reduce transmission between members of communities that might be infected, but not identified, diagnosed and isolated. The mode of transmission is through respiratory droplets and maintaining reasonable proximity from people, and observing social distancing should reduce the rate of transmission (38). In Cameroon, strictly adhering to social distancing would be advantageous in an informal setting, bars, and overcrowded markets. The feasibility of this adherence in an informal settlement where widespread community transmission is believed to be of

high-risk, remains unclear (21). Examples for social distancing includes closure of schools or office buildings and cancellation of gatherings such as religious services, conferences and soccer matches, and being encouraged to work from home (23).

Strict adherence to these measures would help slow down and reduce the spread of the disease. If these measures are considered to be insufficient 'community-wide containment' might be an option to be considered (23). Community wide containment is an intervention applied to minimize personal interactions in an entire community, city or region with the exception of essential supplies personnel. Transitioning from social distancing to community-wide quarantine have major freedom of movement implications and enforcing of community-wide containment measures is more complicated by considering the resources and size of the population (33,38).

Furthermore, community-wide spread containment is also an ethical challenge considering individual right compared to the public health imperative (39). Even the cultural diversity, social media provides a unique communication platform and, if used wisely, it could be an important tool to educate and ensure community-wide compliance (11,35,38). These platforms can be used to communicate reasons for quarantine, reassurance in the interventions and up-to-date information to alleviate false news. For all these interventions to be effective, close partnership and cooperation with law enforcement agencies at the regional as well as provincial level would be crucial. Random checkpoints and legal penalties would be necessary to prevent violation (17).

Burial of Victims of COVID-19

Burials now take place without religious or traditional rites, eulogies or large crowds. Just a handful of family members are allowed in attendance. There have been no pallbearers, professional mourners, hearses and ultimately no funeral homes involved with preparing the

corpses of Cameroon's victims for burial (27). In Cameroon, most people who die of this are interred in public cemeteries, an unusual and inconvenient place for family members. Family members feel disappointed, highly grieved and depressed as they cannot conduct a dignified funeral ceremony for their loved ones (33,35,38,40). Grieving a lost one in this pandemic era has been extremely unusual. The hardest pill to swallow is that burial takes place only a few hours after the death is reported, with very few available family members. Most family members are not privileged to see the remains of their relatives. In Cameroon, when a COVID-19 patient dies, the demise is immediately reported to the emergency via a toll free number, 1510 (7,12,39). Health workers from the closest health district are called in to prepare the coffin and the corpse before proceeding with burial, in collaboration with council officials. The corpse is wrapped in white cloth, placed and secured in a bag or wrapping in a manner that prevents leakage. The bag is labelled "COVID-19, Handle with Care". Families in Cameroon who have gone through this unceremonious burial procedure have raised concerns (11,22,41). Officials of Cameroon's Ministry of Public Health acknowledge this fact, but argue that it is the most appropriate way of disposing of bodies that can further spread the virus to others, if relatives are left to interact with corpses (28,32,42).

Hand Washing and The Use of Sanitizers

Hand hygiene is an important part of Cameroon response to the emergence of COVID-19. Practicing hand hygiene, which includes hand washing and the use of alcohol-based hand rub (ABHR), is a simple yet effective way to prevent the spread of pathogens and infection (5). The exact contribution of hand hygiene to the reduction of direct and indirect spread between people is currently unknown. However, hand washing mechanically removes pathogens, and laboratory data demonstrate that ABHR formulations in range of alcohol recommended by CDC,

inactivates SARS-CoV-2 (34). To curb the spread, the Cameroonian government, Social movements, companies, have launched operations aimed at installing hand washing stations in strategic points in the country's 10 regions. It is now a common issue to find a bucket of water and soap at the entrance to business places, offices, hospital, markets and living homes (32). This has gone a long way to improve on personal hygiene. Some inhabitants still feel disgruntled when asked to wash their hands before entering public offices or individual homes (43).

While this measure may be possible in some urban areas; its applicability in remote areas is a nightmare. These are areas where the inhabitants don't even have drinking water, talk less of water to wash hands, they barely have water to prepare food and use local materials for soap. Most of them are inaccessible and they live under horrible situations (28). They are denied the right to public utilities and services as imposed by section 21(2) of the UN Charter by the government and politicians who only come to these areas during elections period to sweet talk them and disappear thereafter without carrying out any development (36). The government needs to urgently provide these basic necessities to this group of people if not, it will hardly be implemented.

Protection of Essential Frontline Workers

Adequate provision of PPE for the frontline worker is highly essential in the face of a pandemic. Frontline health caregivers must be adequately shielded from harm, to fulfil their duty to care for their patients (9,23,44). Frontline caring for suspected patients require adequate PPE, as specified by WHO on the outbreak guidelines. Increasing global demand has led to price hiking of these vital PPE, which has caused a shortage of these PPE. Frontline workers in the suburbs are still to have access to protective materials and equipment (42,45). Even those centres privileged to have PPE, they are in chronic short supplies. These workers are stretched working long hours with very limited remunerations so far (11,22,38,41).

Treatment of COVID-19 Patients

Both private and public health sectors have to pull their resources together to fight one common enemy and healthcare practitioners have to decide whether patients can or cannot receive treatment (13). In a public health crisis, clear communication is critical to gain the trust of the public. The public must understand the purpose of treatment guidelines to be used (32). To prevent misinformation, patients, caregivers and families must understand how these guidelines are applied and be able to trust in the fairness (28). The government has declared testing and treatment of patients free. Thanks to the availability (though in limited supply) of Rapid Diagnostic Test Kits in various health units across the country (43). This has greatly reduced the waiting time for results. With the acute shortage of treatment protocols, most patients in the community have resorted to herbal treatment approach, thereby promoting traditional system of medicine. This puts the population at great risk of consuming herbal products of unknown efficacy, safety, quality and dosage. The government needs to step in to control this sector before great harm is done (33,35,40).

There is also the element of stigmatization of patients and the family of those who have died of COVID-19. In fact, families are avoiding to take their loved ones to the hospital when they suspect any significant symptom. This is for fear of stigmatization and hence, there is need for proper health counselling and sensitization of this pandemic in the community as a whole (22,24,27,38,45,46).

Conclusion

This review suggests that the impact of the public health measures are broad including psychological, ethical, socio-economical and can be long-lasting. However, this is not to suggest that these public health measures are not effective of note, the psychological effect of allowing a pandemic to spread without implementing these public health measures is more devastating (30). A utilitarian approach in

addressing a pandemic deprives people of their liberty for the greater good and is often a topic of debate and needs to be handled with care. In the absence of a vaccine, high transmissibility rate and now declared as a “pandemic” public health measures become essential to curb the spread and flatten the curve of SARS-COV-2 (21). To flatten the curve, these public health measures remain our only option, great care should be taken in the implementation of these measures so that the experience is as tolerable as possible for all (10). This can be achieved: by clear, accurate and concise communication informing the people about the pandemic, explaining how long these measures will continue and why, ensuring basic essential supplies (such as clean water, food and access to medical care) are available. This pandemic has changed the manner in which we conduct our daily routines (33,34). Many of the new regulations, such as best hygienic practices, should become normal every day practise. Lessons have been learned from previous outbreaks of HIV and Ebola (17). This will most likely not be the last major disease outbreak the world will see, as we deal with pathogens every day. In the context of ethical concerns and disease outbreaks, the individual right versus the general public health measures should be carefully considered.

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