Rapid Response Brief
March 2020

Covid-19 control: How can an LMIC implement a jurisdictional lockdown to prevent spread of infection in the community?

Key messages

‘Poor countries' may consider a community-based lockdown as part of the intervention to control the corona virus epidemic in the country. To do this, the following do be necessary.

- In a community-based arrangement, the lock down is in manageable regional or localized units, based on existing boundaries or temporary new ones.

- Within each localised unit, there are essential basic structures systems and conditions that need to be availed to ensure they are functional and can survive independently during the defined period.
  - A comprehensive and functional health service
  - Basic essential social services
  - Special health border/boundary surveillance
  - Active social surveillance
  - Control of fear, misinformation and propaganda
  - Support for the local community
  - Survival support

- Other considerations include the need for institutionalizing parts of the intervention following the end of the crisis

Where did this Rapid Response come from?

This document was created in response to a specific question from a policy maker in Uganda in 2020.
It was prepared by the Center for Rapid Evidence Synthesis (ACRES), at the Uganda country node of the Regional East African Community Health (REACH) Policy Initiative

Included:

- **Key findings** from research
- **Options** for policy implementation
- **Considerations about the relevance** of this research for health system decisions in Uganda

Short summary

Background: The WHO declared Covid-19 a pandemic. At this stage in many countries, one of the questions yet to be answered with certainty is where a good proportion of people get the infection from, because there are no known index cases for the newly infected after an initial period where cases are easily traced back to travellers and persons known to have been in contact with already infected cases. At this point it is safe to assume that there are unknown sources of infection in the community.

It is on the backdrop of this that social distancing is suggested as an intervention to prevent and/or reduce transmission in the community. Several countries globally have adopted locking down their territories as an intervention to slow or stop the spread of the virus based on evidence from countries that have faced the brunt of other epidemics like SARS and Ebola, and the Covid-19 pandemic ahead of others.

However there are challenges of adopting the intervention in a one-size-fits-all way considering the varying economies and socio-cultural ways of life in the different countries.

Therefore this evidence-informed rapid policy brief presents implementation strategies for a contextualised jurisdictional lockdown for a low and middle income economy like Uganda.

In it we suggest that a **community-based lockdown** is appropriate and effective in slowing the transmission of infection in the Covid-19 epidemic. The lockdown would be enforced in smaller manageable regional or localised units demarcated according to some existing boundaries or temporary new ones.

There are basics that these units would aim to have in place to be functional and can survive the lockdown period independently. These include seven essential elements:

- A comprehensive and functional health service
- Basic essential social services
- Special health border/boundary surveillance
- Active social surveillance
- Control of fear, misinformation and propaganda
- Support for the local community
- Survival support

We also suggest that the above should be enforced in the following context or with consideration to the following:

- The need to view the epidemic as a security threat - health and social security.
- A need to respect the basic human rights of all citizens, and to use as much diplomacy as is guided by the national social protection policy of Uganda.
- The opportunity to harness and institutionalize innovations or parts of them made during this time to be made use of even after the crisis.

Background

> **How this Rapid Response was prepared**
>
> After clarifying the question being asked, we searched for systematic reviews, local or national evidence from Uganda, and other relevant research. The methods used by the SURE Rapid Response Service to find, select and assess research evidence are described here: www.evipnet.org/sure/rr/methods

The world is currently faced with a pandemic, the Corona virus disease also known as CORVID 19 (COVID 19). At this stage in many countries, one of the questions yet to be answered with certainty is where a good proportion of people get the infection from, because there are no known index cases for the newly infected. In the initial stages of the epidemic in a country, cases are easily traced back to travellers and persons known to have been in contact with already infected cases. However as the epidemic progresses, newly infected cases get quite difficult to be linked to any such sources. At this point it is safe to assume that there are unknown sources of infection in the community.

It is on the backdrop of this that social distancing - an effort to reduce the risk, frequency and duration of social contact to minimise spread of disease – is suggested as an intervention to prevent and/or reduce transmission in the community. Several countries globally have adopted locking down their territories as an intervention to slow or stop the spread of the virus. Indeed, evidence from countries that have faced the brunt of other epidemics like SARS and Ebola, and the Covid-19 pandemic ahead of others has suggested that reducing and controlling the number of movements and social interaction is effective in at least slowing the spread of the infection and contributes to the overall control of the epidemic in a given area. According to the "Diagnosis &Treatment Scheme for Novel Corona Virus Pneumonia (Trial) 6th Edition", the source of infection of CORVID-19 is majorly the patients, including those that are asymptomatic, and the mode of transmission is mainly through respiratory droplets and contact. It is assumed that the effectiveness of locking down an area is effective through isolating the virus, and any population that might be already affected hence cutting off transmission.

The effect on neighbouring or other jurisdictions because one area went into a lockdown has not been documented. However, it is assumed that a country that is under lockdown would export fewer cases to its neighbours especially through cross border travel.

To effect a complete lockdown you would need for the concerned territory and its citizens to be able to survive without the need for outside interaction or intervention for the designated period. Such intervention may be for food, medical supplies and other social services. In addition, citizens would also be able to go without the absolute need for interaction within their community – schools, shopping

areas, places of worship would all be closed down. Furthermore, gatherings like funerals would also be halted.

A lockdown is a viable solution, at least in part, to the pandemic, from a medical viewpoint. However when combined with several other socio-economic viewpoints, the practicability and sustainability of a lockdown in an economy of a poor country becomes difficult. With the economy already suffering (Uganda has so far fallen below its revenue projections by 3 trillion, and it is less than a week since we discovered the first case), such a move may cripple the country in several ways for a long time. 780, 000 will become poor in the short term and 2.6 million in the long run. The crime rate would quickly spiral out of control while cases of unchecked domestic violence may also be common place.
For poor economies, a complete lockdown may not be feasible for these and more reasons.

The question for the country leadership would then remain that if a lockdown has been proven as an effective intervention, how can it be contextualized to a poor country's case to ensure that the population benefits from its contributory effect on the control of a pandemic like the covid-19 one epidemic? This brief presents implementation considerations for a lockdown as a policy option to contain an epidemic in a poor country.

Summary of findings

Considering a lockdown as an intervention should be based on the principles built from the facts known about the management and control of the disease. The most effective prevention and control measures used to date are: a) to find suspected patients and close contacts, b) confirm patients and virus carriers, and c) block the transmission through isolation, disinfection, and personal protection. All of this should be done early or in a timely manner so as to maximise the benefit.

Community-based lockdown

What poor countries can do is a 'decentralised' lock down or what I will refer to as a community-based lockdown. In this arrangement, the lockdown is in manageable regional or localized units. Such units may follow already existent administrative boundaries like districts or health regions (regions demarcated for purposes of service delivery), or new temporary ones drawn according to certain

criteria. Within these units, essential social activities would continue under defined terms and conditions. Once the boundaries of each unit are clear, these would need to be communicated to the public and to the governance structure. Entry and exit points would need to be defined explicitly and then controlled, just like border points of a country. All units would ideally be closed off to entry and exit except for crucial travel which would be defined.

The ultimate danger we are all faced with is a health-related one. In each of these units, there needs to be a **comprehensive and functional health service**. This service should be able to treat all uncomplicated conditions without frequent referral outside its borders. Above all, it should be able to carry out the vital basic health interventions for the current epidemic - find suspected patients and their contacts, and confirm patients and virus carriers (or at least collect samples and coordinate with a central testing center).

There are three other crucial issues that need to be dealt with in the process: i) the need to avoid hospital-acquired infection by strengthening the management of medical staff and patients; ii) health education on knowledge for disease prevention and control. iii) research and learning to contribute to the body of knowledge for our local consumption and for the global advancement of science – knowledge gaps still exist about the pathogenesis of the virus and its management.

Other basic **essential social services**[1] need to be ensured too. The non-essential services like schools may be suspended (although again for many what looks like non-essential, is in fact essential. For example, school is a source of meals for children, for some the only one they might have in a day…….) but there are services like local justice systems, registries of births and deaths, and water and sewerage services that need to be available. The availability and functionality of these ensures that the need to do any border crossing is reduced. If these are not availed, even when boundaries are defined, people will find ways across them illegally just to be able to access services, hence jeopardising the intervention as a whole.

There should be **special health border surveillance** for the persons allowed or deemed necessary to do any cross-border movements. Surveillance for any persons entering or leaving the unit has to be in place and has to be systematic. There has to be surveillance services at every 'border' point, whether these are short distance or long distance travellers, whether coming from a virus free community or not,

[1] Essential social services for Uganda need to be clearly defined within its context.

until a period of more than 14 days (incubation period) with no new case in any of the units within that territory is recorded.

There needs to be **active social surveillance** within these units in a *neighbourhood watch* or Uganda's *Mayumba kumi* style to ensure adherence to the government/territorial leadership directives and guidelines. Enforcing the lockdown may depend on law enforcement but would also benefit from the public being each one's enforcer. This would require that the public has bought into the idea and feels some kind of ownership. It may also be dependent on the public being in a position of serious concern, enough to act for their own safety. This means harnessing the early environment of the epidemic, before the public gets complacent or is too fearful to get involved.

During such a time, there is a lot of misinformation that may spread throughout communities. There is a need to **control fear, misinformation and propaganda**, and in a timely manner. Several reasons may present themselves, but poor and untimely information sharing is a major one that needs to be avoided. The official channels of communication (even those originally informal but now chosen as routes) should be known, and these should be active to avoid gaps that may be filled by other sources of information.

While ensuring all the above, care could be taken to **support the community of the local unit**. As much as is possible, goods and services should be procured locally, providing an opportunity for people within the unit to supply the needs of that community they live in. In this way the buy-in and ownership may be fostered. For example, the provision and procurement of food and essentials could be ensured to be local. People may be encouraged to provide services that were not available locally, say delivery or waste services. Make use of community health personnel like pharmacists, nurses and community health workers, who may be used to give health education or do health surveillance. Furthermore, local influencers should be identified and made use of to foster community buy-in.

There needs to be provided **survival support for the community**. A community 'cut off' from others quickly gets disoriented in many ways. At the moment we do not have full information on how long a lockdown should be for. But if we are to borrow from the only country that has just lifted its lockdown (late January to late March), China, this could easily take months. Within this time, the community may need support in different ways. There are persons who are wage earners and whose services may not be deemed essential. Many of such persons in a poor economy do not have any savings that would see them through such times, leave alone for a prolonged period. There is need to provide for vulnerable

populations e.g. the destitute in those communities to avoid crime; orphans and elderly persons, internally displaced persons, refugees and more. Elderly persons who are dependent on their relatives elsewhere may not be able to go through such a period unaffected. The unit authorities need to work with the central government to look at what survival support to prevent socio-economic effects look like for each of their jurisdictions. There is already guidance in form of the social protection policy of Uganda that can be used for this purpose.

Other considerations:

- Crises have been known to lead to the mobilization of resources – systems and structural – that are sometimes unprecedented, and would otherwise have not been available. They are also known to lead to innovations. This was seen with the HIV crisis in Uganda and the Ebola crisis in West Africa. It presents an opportunity that needs to be harnessed. Innovations or parts of them made under this community-based lock down should be institutionalized and made use of even after the crisis.

- In implementing a community-based lockdown, one needs to look at the corona virus epidemic as more than a medical problem, and more like a security threat - health and social security. In this way, multiple viewpoints would contribute to the decision-making involved.

- While all of this is being implemented, there is a need to respect the basic human rights of all citizens, and to use as much diplomacy as is possible to ensure social cohesion even after the intervention. The World Health Organization emphasizes that where public health laws authorize interferences with freedom of movement, the right to control one's health and body, privacy, and property rights, they should balance these private rights with the public health interest in an ethical and transparent way. Public health powers should be based on the principles of public health necessity, reasonable and effective means, proportionality, distributive justice, and transparency.

Conclusion

While rigorous adherence to different options is critical, countries may be more successful in containing the covid-19 pandemic if they validate and combine appropriate lockdown practices that involve the use of locally manageable units. Such units make use of local community knowledge, experiences and resources, fostering a buy-in from the population that needs to be protected. In all, making a lockdown work should be in a way that is manageable for the government, builds community trust and buy-in, and is based on the principles built from the facts known about the management and control of the disease –

that is, finding suspected patients and close contacts; confirming patients and virus carriers; and blocking the transmission through isolation and personal protection. All of this should be done early or in a timely manner so as to maximise the benefit.

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Conflicts of interest

None known.

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What is Rapid Response?

Rapid Responses address the needs of policymakers and managers for research evidence that has been appraised and contextualised in a matter of hours or days, if it is going to be of value to them. The Responses address questions about arrangements for organising, financing and governing health systems, and strategies for implementing changes.

ACRES – The Center for Rapid Evidence Synthesis (ACRES) is a center of excellence at Makerere University- in delivering timely evidence, building capacity and improving the understanding the effective, efficient and sustainable use of the rapid evidence syntheses for policy making in Africa. ACRES builds on and supports the Evidence-Informed Policy Network **(EVIPNet) in** Africa and the Regional East African Community Health **(REACH)** Policy Initiative (see back page). ACRES is funded by the Hewlett and Flora foundation.
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EVIPnet

Glossary

of terms used in this report: www.evipnet.org/sure/rr/glossary

This Rapid Response should be cited as

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